ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. LXXXVII No. 5 Thursday, Aug. 2, 1928

Three New Fox River Valley Projects Started

Northern Paper Mills Erecting New Three Story Warehouse—One Floor to be Used as Converting Department and Two to be Used for Storage—Appleton Machine Co. Begins Work on New Foundry—Marathon Paper Mills Co., Printing & Carton Division, Starts Construction of New Waxing Addition at Menasha, Wis.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., July 30, 1928.—Three new building projects were started during the last week among plants in the Fox River Valley. The largest of these is a three story warehouse for the Northern Paper Mills, Green Bay, Wis., and the others are a new foundry for the Appleton Machine Company, Appleton, Wis., and a waxing building for the Marathon Paper Mills Company Printing and Carton Division, Menasha, Wis.

Construction at the Northern mills embodies a building 112 by 299 feet in size, and will give the concern 100,000 square feet of added floor space. The frame is of steel, the walls of brick, and the footings and floors of concrete. The warehouse is located at the north end of the property. Two floors will be used for storage purposes and a converting department is to be placed in the third one. With the exception of the steel work, the erection is being done by the Northern's own men. The building is expected to be ready for use by January 1.

Expenditures of approximately $75,000 will be made by the Appleton Machine Company in its improvement and expansion program. The new foundry will be located across the street from the present buildings and will cover a large ground area. It will be of concrete, steel and brick construction. The present foundry has been inadequate to the needs of the company during its growth in recent years and the new one will greatly facilitate production on the paper mill machinery which is made there.

A one story addition 40 by 125 feet in size is being built by the Marathon Paper Mills Company, Printing and Carton Division. It will be largely of concrete and fireproof because of the nature of its use. The company recently had an extensive loss when its waxing department was destroyed by fire, and this building will replace the damaged property. C. R. Meyer & Sons Company has been awarded the building contract.

G. W. Mead to Run for Senate

Wisconsin's fall elections will be of more than usual interest to the paper industry due to the fact that George W. Mead has finally yielded to public and party pressure and has announced his candidacy for United States Senator in opposition to Senator Robert M. LaFollette. Mr. Mead is president of the Consolidated Water Power and Paper Company, of Wisconsin Rapids, Wis.

Two and a half years ago Mr. Mead consented to run for mayor of his home city after receiving practically a unanimous request from the employees of his mills. Last spring he was re-elected without opposition by the largest majority ever given a candidate for Mayor of Wisconsin Rapids. He was backed unqualifiedly by labor, and it was this regard for his leadership that led many to believe he could attract enough support to defeat Senator LaFollette where others might fail.

While Mr. Mead entered the race of his own volition and not as the choice of a party caucus, he will be on the Republican ticket and says he "endorses Hoover and Curtis because of their outstanding ability as statesmen, not as politicians." He is termed a partisan independent and is running on a platform of "constructive liberalism."

Power Experts Inspect Paper Mills

A. R. Frahm, of the Northern States Power Company, Eau Claire, Wis., was elected chairman of the electric section of the Wisconsin Utilities Association, at the annual state convention at Appleton, Wis., last week. About 150 representatives of power companies were present for the sessions, and as a part of their program made a tour of some of the paper mills of the Fox River Valley. Mr. Frahm succeeds Grant Ford, of the Wisconsin Valley Electric Company, of Wausau, Wis. The new vice chairman who succeeds Mr. Frahm in that office is D. G. Evans, of the Wisconsin Gas and Electric Company, Racine, Wis. Discussions had to do largely with the commercial aspects of the power business.

Lumber Interests Contest New Freight Rate

Steps to prevent west coast lumber interests from capturing the pulp wood business of Wisconsin paper mills were taken by the Northern Hemlock and Hardwood Manufacturers Association at a midsummer meeting last week at Rhinelander, Wis. The transportation committee was instructed to ask a suspension for the time being of a new freight rate schedule which the Interstate Commerce Commission was expected to put into effect. This schedule applied to pulp wood shipped from Oregon and Washington to Wisconsin. The rate sought by west coast producers, it was said, was "ridiculously low" and with a larger supply of pulp wood and other advantages, the lumber companies in Wisconsin and Upper Michigan would be placed at a distinct disadvantage. A hearing will be asked before these rates are put into effect.

Menasha Sales Plans Discussed

Thursday, Friday and Saturday of last week were devoted by the Menasha Printing and Carton Company, of Menasha, Wis.,

(*Continued on page 40*)

Pennsylvania Board Mills on Summer Schedule

Manufacturers Reported to be Confining Production to Five Days Per Week—Book Paper Mills Operating on Full Time or at Near Capacity — Roofing Plants Continue Active With Demand Well Maintained—Quieter Trading Period Prevails

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., July 30, 1928.—Following a more active mid-July demand for paper the local dealers were again subjected to a quieter trading period as interest in the paper market drifted along in the doldroms of the mid-summer. It was a draggy time for many of the distributors who are not involved in the seasonally active stocks and who were drifters along with a typically slower month ending as might be expected with the closing of the inventory for the half year. Distributors were more interested in disposing of hold-over and stale stocks than in the replenishing of warehouses for the coming autumn activity. Many of the jobbers have been obliged to take considerable losses on certain grades of paper that have been subjected to the pruning knife of the manufacturers in the recent price warfare.

Those distributors in the Quaker City trade catering to the consumers of corrugated products have been heavy losers in the recent warfare between manufacturers from outside markets. Losses extending in many cases to 20 per cent or more have been sustained in the cheaper corrugated containers and rolls. Present prices quoted by the manufacturers who are involved in the competitive bidding for business are 20 per cent below the values of last year at this season. Distributors have just cause for complaint in the loss which they have suffered by the invasion of the manufacturers and are patiently awaiting the cessation of the conflict among the larger producers in order to conduct business without serious impairment of profits which they might otherwise make. Much of the corrugated paper that is being offered is very inferior quality and distributors believe that it is not long before the consumer will awaken to the fact that quality must be had at a fair price for the goods and workmanship. The competition between the larger New York producers and the Philadelphia distributors makes it difficult for the local men to carry on their campaigning for Fall business in the container stocks as they must await stabilization before making purchases from the manufacturers or before offering their present wares, bought at the higher prices of the year. Consumers have been served by truck transportation from New York and shipments have been speedily handled so that the Metropolitan manufacturers have the advantage of the situation at this time when prices are more a matter of consideration in making sales than quality. Distributors believe that when the consumers have lost confidence in the class of goods now being sold under the firmer market values of the year there will be a return to the demand for quality rather than for cheaper and less practical containers and roll products.

Manufacturers of paper boards are on summer schedule with production now confined to a five day week. The producers of book papers and printing grades are reported on full time or near capacity basis with orders already booked for the next four to five weeks operation. Roofing paper manufacturers and those mills making building grades are operating on full time with demand well maintained. Most of the mills have disposed of their stocks on hand in the semi-annual inventory sales and are now prepared for the coming autumn production. Manufacturers of high grade tissues are enjoying a gratifying demand for the No. 1 grades.

There has been a draggy pace to the wrapping paper market. A few seasonal specialties continue to dominate demand for hot weather requirements. Mills are reported to be fairly well booked ahead with considerable tonnage orders secured when the values were made attractive for the purpose of maintaining hot weather schedule of operation. There is a generally stabilized price situation in the bag market. Independent manufacturers have lined with the nationally prominent producers in raising the prices of bags. On Monday there was effective 2½ per cent increase in the price of bags from all the leading manufacturers with a 2 per cent increase emanating from the larger independent producers. Book and ledger grades of paper stock are now quoted at slightly lower prices after a very strong market which sent quotations soaring for the summer.

George W. Ward Visits Straits Settlements

Word has been received here by officials of the D. L. Ward Company, 28 South 6th street, of the arrival in the Straits Settlements of the head of the firm, George W. Ward, who is on a world tour after several months' sojourn in Tucson, Arizona, where he was under treatment for sinus infection. At the time of the receipt of the communication from the head of the firm he was sojourning in Singapore.

Strathmore Paper Co. Distributes New Samples

Philadelphia fine paper dealers have been receiving an attractive pamphlet from the Strathmore Paper Company, showing the range of English Finish and High grade printing papers that will be ready for the Fall stocking and now available for the trade. The pamphlet contains samples of very fine grades of the Strathmore products with a wide range of colors and white papers.

Charles W. Williams Co. Adds New Products

Brilliantly colored and designed papers adapted for the box making trade and appropriately titled for their usefulness in decorative schemes have been added to the list of box makers' specialties featured by the Charles W. Williams Company, of New York, and are now on display at the Quaker City headquarters in the Bourse Building. The new lines are being shown to the trade and the box manufacturers and include the latest Hindu Tone and Art Tone. The former comprise the Bengal, Bombay and Burma papers colorfully designed in the Hindu motif and hues of the nation for which they are titled. These papers are the latest for fancy box covers and the Quaker City manufacturers have been buying freely for the new autumn supplies from the samples shown by the local manager, George W. Hallahan.

Unity Paper Co. Buys Bankrupt Paper Supplies

The Unity Paper Company, of which John W. Dankel is head, is well stocked with stationery and paper goods bought at recent bankrupt sales of the E. H. Rapp Company, Lambert & Braceland, and Hoskins & Osbourne. These paper wares are being sold at the headquarters, 927 Sansom street, where extensive stocks of stationery requisites and paper supplies are being offered. The stationery concerns involved in the bankrupt sales are among the larger Philadelphia houses recently involved in financial difficulties and their assets were offered on the auction block by the receivers. The Unity Company has been featuring the sales of such large purchases of job lots and bankrupt purchases as a specialty business for several years. The business recently was removed to the Sansom street address from the old location in Walnut street.

John Lang Paper Co. Operating New Plant

As the Philadelphia plant of the John Lang Paper Company closes its doors, the Gloucester, N. J., mills of the company are being equipped with machines removed from the quarters long occupied and located at 24th and Vine streets. There are two paper machines now in operation at the Gloucester Mills occupying the site of the former Pusey and Jones Ship Building Plant. It is expected the new quarters will be in complete operation by

Fall. The John Lang Paper Company for many years was one of the leading roofing and felt paper manufacturing concerns of the Quaker City. Its site at the Vine street junction of the Parkway was condemned by the City of Philadelphia as part of the grounds to be devoted to the entrance to Fairmount Park. Demolishing of the buildings will begin shortly and the site turned in to the Parkway.

E. Kenneth Hunt Promoting Champion Coated Papers

A tour of the printing firms of the Quaker City has been featured in the early summer months advertising work of Advertising Manager E. Kenneth Hunt, of the Champion Coated Paper Company, under direction of the Philadelphia Branch, in the Drexel Building. In co-operation with the local manager, Charles A. Labor, special missionary work among the leading printing houses of the territory has been undertaken in promoting the sales of the line of coated book papers and other grades made in the Champion Mills.

Eagle Corrugated Products Distributed by Paper House

The line of corrugated specialties manufactured by the Eagle Hy-grade Corrugated and Paper Products Company, of Long Island City, N. Y., are being distributed by the B and L Paper Company, 717 North 2nd street. The members of the firm who have the local representation are Benjamin Breggar and Samuel Lipshutz. The Eagle Corrugated products consist of rolls, packing boxes and containers.

Grellet Collins Jr. Developing New Paper Formulas

Grellet Collins, Jr., son of Grellet Collins, president of the Dill and Collins Paper Company, manufacturers of printing and book papers, with mills in the Richmond District, is now connected with the Bryant Paper Company, of Kalamazoo, Mich., and is highly successful in his paper chemical work in the laboratories of the western concern. He has been highly commended for the work he has been doing in perfecting new formulae for making high grade printing papers for producers of book papers, super calendered and enameled grades. Before joining the western mills he was associated with his father in the production division of the Dill and Collins Company, severing his connection with that concern in the early months of the current year to join the Kalamazoo paper mills.

McDowell Paper Mills Line of Glassines

The trade is receiving a complete set of the high grade line of glassine papers made by the McDowell Paper Mills, of Manayunk paper making district, showing the newest designs in herringbone, cobweb and other fancy designs. The mills have been enjoying very gratifying summer sales on these specialties which have been developed since the post war days along with the grease proof papers now being produced for the food trades. The glassines are popularly priced for the high quality of the production and the beauty of design and are being generously stocked by the leading distributors.

H. J. Fleming Representing Racquette River Co.

Harry J. Fleming, who has been associated with the paper trade for many years, is now representing the Racquette River Paper Company, with local offices at 32 North 6th street, in the same building with the Paper House of Pennsylvania. He has for several years concentrated on die wiping papers used by the engraving trades and is specializing in these grades made in the Potsdam mills of the Racquette River Company. He is now in the West, having attended the recent convention of Engravographia held in Milwaukee a fortnight ago.

Bentley Paper Co. Issues DeJonge Brochures

Through the recently appointed Philadelphia distributors of printing papers manufactured for the Louis De Jonge Company, of New York, the Bentley Paper Company, with offices in the Public Ledger Building, there is being distributed to the trade a most attractive brochure of the various lines included in the printing grades. The De Jonge Company recently severed its printing paper distribution from the box makers and bookbinders supplies and these are included in the fine book that is now being sent to the dealers. Included in the printing specialties compiled in the book are the De Jonge Art Mat, White and India Ivory; Deco Mat, in white and ivory; Art Gloss and Deco Gloss in white and ivory, and the Duro Gloss Engravers Proving Papers, with the Blanca Coated One Side Art Mate Postal Card in white, ivory and India. All these are included under a single cover in various weights and grades. The cover announces that the Bentley Paper Company will distribute these in the Quaker City and surrounding territory. The box makers supplies and book binders' paper wares will remain under the distributive district of the De Jonge offices in the Insurance Company of North America Building.

Papermakers to Meet at Pyrites

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., July 25, 1928.—The Northern New York Conference of Papermakers, a branch of the International Brotherhood of Papermakers, will hold an important meeting at Pyrites, August 5, according to announcement by Frank P. Barry, president of the conference and vice president of the Brotherhood. Leslie Murtaugh, of Deferiet, is secretary of the conference. According to plans for the gathering, a number of International officers of unions affiliated with the papermaking industry will be in attendance. More than 100 delegates are expected from the local unions in Northern New York including Watertown, Black River, Deferiet, Felts Mills, Great Bend, Carthage, Herrings, Oswego, Harrisville, Pyrites, Gouverneur, Norfolk, Raymondville, Potsdam, Waddington and Norwood.

According to information gained at Brotherhood headquarters here further work of organizing papermakers in Holyoke, Mass., will be left to committees from the Holyoke locals at least during the summer months. Matthew Burns, former International secretary of the Brotherhood, has been doing organization work in Holyoke but returned to Albany a few days ago.

J. L. Fearing Has Not Resigned

Archibald R. Granstein, president of the International Paper Company, has sent out the following announcement which is self explanitory:—

"My attention has been called to the fact that in a recent issue of one of the trade journals, publicity was given to a rumor that J. L. Fearing, vice-president and sales manager of International Paper Company, has resigned.

Mr. Fearing has been with the sales department of the company since its organization, and has risen to his present position of vice-president and sales manager through his uniform and outstanding success in this department. At the time he was appointed sales manager in 1923, the company's total productive capacity of paper for sale was 580,000 tons a year, and it is now over 1,200,000 tons.

Neither the company nor Mr. Fearing has any intention of severing the relations which have been so long continued and so satisfactory on both sides.

Rush Work on Fairfield Mill

[FROM OUR REGULAR CORRESPONDENT]

BALTIMORE, Ohio, July 25, 1928.—Work on the two new additions to the mill of the Fairfield Paper Company at Baltimore is well under way. The estimated cost of the improvements is $43,000 and the new equipment is $70,000.

One of the new structures will connect two buildings and in it will be installed modern corrugating machinery.

The other improvement will be an addition built to the stock room.

The Baltimore plant employs about 300 and it is said that the new additions will not result in much more employment of workers as the new machinery will be of labor-saving variety. The plant makes corrugated paper and paste-board boxes.

The general contractors for the new improvements are the H. K. Ferguson Co. of Cleveland.

Kalamazoo Paper Organizations Consolidate

Sutherland Paper Co., and Associates, Keen, Higbie & Co., Complete Purchase of Standard Paper Co. Stock for $2,500,000—Organized in 1904 by the Late Joseph Addison Pitkin, the Standard Paper Co. Has Always Been Consistent Dividend Payer

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., July 30, 1928.—Negotiations for the consolidation of the Sutherland Paper Company and the Standard Paper Company were formally closed Wednesday when the stock of the latter concern was purchased by the Sutherland Paper Company and their associates, Keane, Higbie & Co., Detroit investment bankers. Stock of the Standard has been deposited with the Trust Department of the First National Bank and Trust Company and new certificates are now being issued and distributed. Standard Paper stockholders are receiving in return either Sutherland stock on a share for share basis, or are being paid $25 per share cash by Keane, Higbie & Co.

Standard Organized in 1904

The Standard Paper Company was organized in 1904 by the late Joseph Addison Pitkin, then president of the First National Bank. He held the office of president of the Standard Paper Company until his death in 1907. James H. Dewing succeeded Mr. Pitkin and served 1907-1911. Bartlett C. Dickinson was then named to succeed Mr. Dewing and has held the office since that date.

A Successful Enterprise

The Standard Paper Company has been one of the most successful industrial enterprises in this city. The original capital was $60,000. Over the period of years it has increased to $1,000,000, the sale price in the transaction just completed being $2,500,000. The company has been a consistent dividend payer and the stock has always been in demand at a price far above par.

Watervleit Mill Improvements

After nearly eighteen years of continuous use the old paper machine at the Watervleit Paper Company is being subjected to a complete overhauling and re-building, according to W. M. Loveland, president. The machine will be lengthened 30 feet by the addition of five driers and a new size press. Another feature will be installation of a new Bagley and Sewell back drive, an innovation in paper mill equipment. The machine in years past has been able to produce 28 to 30 tons of paper daily. The improvements in progress will materially increase the output.

Machine Built by J. H. Horne & Sons

J. H. Horne and Sons Company, Lawrence, Mass., built the original machine and Robert Lomax superintended its erection in the Watervleit mill. After the extended absence of eighteen years, he is again back on the job and is boss on the overhauling job. He expects to have his work completed early in the fall months.

Cost and Technical Men Meet

Kalamazoo Valley Division, Cost and Technical Association of the Paper Industry, met Wednesday evening at the Otwellegan Country Club, for dinner and an interesting program. There were about 35 present. Arrangements for the meeting were made by officials of the Michigan Paper Company, Plainwell.

Frank Brown gave a talk on "What Determines Price." Carl Handy's subject was a general discussion of bonus systems, while Don P. Smith, Pennsylvania Salt Company, read a paper on "Caustic Soda and Its Use in the Preparation of Paper Stock, Books and Magazines."

Bryant Paper Co. to Install New Machines

Considerable repairs and alterations are now being undertaken at the Imperial Coating Division of the Bryant Paper Company, preparatory to installing several new coating machines, to replace a battery long in use. A. J. DeKoning, contractor, is laying new concrete floors and changing a number of partitions, the latter for the purpose of enlarging certain units of the coating plant.

Gardner-Harvey Employees Have Outing

DAYTON, Ohio, July 30, 1928.—The annual outing of the Gardner-Harvey paper mill employees of Middletown last Monday was one of the best ever given under the auspices of the Mutual Benefit Association. When the suggestion was made that the committee arrange a picnic somewhat out of the ordinary, it was taken up readily with the result that a boat ride on the Ohio River was planned.

So when the Washington steamed out of Fernbank, Ohio, it was loaded with human freight from the Paper City of Ohio. Every wheel in the large paper mills ceased operating and all employees joined in the outing. The day was filled with novel entertainment and many specialties to make it the greatest event of its kind in the history of the mills or the association sponsoring the day's outing. All the while the large boat was plying the waters, the guests were pursuing different forms of entertainment.

A prize was given for the largest family in attendance and indications pointed to considerable rivalry in this respect as some families turned out "enmasse." This might sound somewhat Rooseveltian but be it known the stork has a way of adding to the population in the Miami Valley that is all his own.

The train carrying the employees of the paper mills left Middletown at 8 a.m. and arrived at Ferndale at 9:30. The boat departed at 10 o'clock, giving all ample time to become comfortably settled after the train ride. The boat steamed up the river 40 miles, passing through two Government locks. The boat returned at 6 p.m. and all employees were back in Middletown by 8 o'clock.

From 10 a.m. through the entire trip a 12-piece orchestra provided music for dancing. An hour before luncheon was devoted to the children, D. W. Jacot, who has a reputation of providing entertainment that especially delights the younger set, having been in charge of that feature of the program. There were musical games, a tug of war, a shoe race, balloon-blowing contest and a potato race.

Following luncheon, a program including selections by the Blue Ribbon quartette and by individuals was given. Those participating were Miss Margaret Wishaar in selections from "Bygone Days"; selections by Mrs. Floyd Lockhart; a little harmony by the Misses Magdaline and Oveda McKee; a reading by Miss Janet Weber; songs and piano selection by Miss Ada Weishaar; and dancing specialties by Ruth Price and Mary Butterfield.

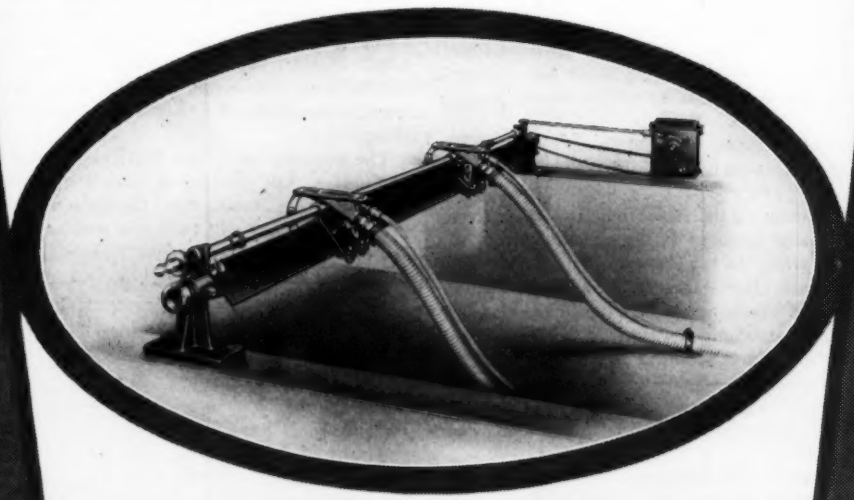
Not the least interesting part of the afternoon program was the speechmaking, which, of course, was of the most pleasant character. There was no attempt to impose "weighty talk" upon the assembled guests. Rather pleasantries were passed out. The addresses were delivered by Tom Harvey, Clarence Harris and George Harvey, all of whom spoke in an entertaining manner. Their talks dealt with an appreciation of the company spirit characterizing such annual gatherings.

Dancing, card games and a special surprise program brought the remainder of the program to a close when the guests returned to the boat landing and the homeward trip was made. It was a delightful trip in every particular and the consensus was that the 1928 outing, with the Ohio River trip as a feature, was the best ever given by the Mutual Benefit Association.

Vickery Felt Conditioners

No investment you could make would give more definite assurance of satisfactory and substantial returns than investment in a Vickery Felt Conditioner.

May we have a chance to prove it to you in dollars and cents?



BIRD MACHINE COMPANY

South Walpole : : Massachusetts

2151

Demand for Paper Fairly Good in Chicago

While Business Is Somewhat Disorganized Through Usual Summer Depletions, Prices Remain Steady and Unchanged, and Outlook for Autumn Is Promising—Fine Paper Grades in Better Request—Wrapping Paper Moving in Satisfactory Volume

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., July 30, 1928.—Sales organizations in the various paper houses in Chicago are somewhat disorganized at this time when the usual depletions take place because of vacations. There is little to report of extraordinary interest in any lines while the various associations in the city are more or less marking time until fall.

As for business itself, it is reported to be very fair considering the season and the outlook is said to be moderately optimistic for the fall. Prices in almost every line are steady and though business is going through its seasonal slow-up, sales forces are making headway by extra sales effort and concentration.

The wrapping paper interests report normal conditions for this time of year. Fine papers are a bit more lively than usual as direct mail advertisers are already tuning up for fall advertising campaigns. The literature coming from direct mail houses making use of the postage changes is interesting and has an excellent sales appeal that is certainly making headway. News print is reported about the same as last week with consumers still taking a satisfactory volume on contract. Talk of impending price cuts is still heard as one visits the news print sales offices. Book paper is fair, with prices firm, while box board is in demand although production is reported just a bit below par.

Trade Association's Plans

The Chicago offices of the Paperboard Industrial Association at 608 South Dearborn street, report that plans are already being made for the next meeting of the association to be held in Chicago, September 19 and 20. The location of the meeting has not yet been determined as far as hotel accommodations are concerned. The central location enjoyed by Chicago is expected to draw an unusually large crowd to the program which will probably follow past methods in that the three divisions will each have meetings combining on the last day for an interesting joint program. Members of the association are still talking about the enpoyable and interesting meeting held recently at the Clifton Hotel, Niagara Falls.

The Chicago Paper Association has completed plans for its joint meeting with the members of the Milwaukee Association, July 31.

The Salesmen's Association of the Paper Industry has more or less halted its Monday noon meetings at the Hamilton Club until the vacation season is over. The members are becoming even better acquainted with each other, however, through the medium of the very enjoyable golf tournaments staged each month. The interesting program of the association as outlined by H. R. Knott, Eastern Manufacturing Company, president of the Chicago Division, will probably get under way again in September when well known speakers will be combined with an educational program that is expected to draw crowds throughout the coming fall and winter months.

News of the Industry

Bradner Smith & Co. have a new folder, issued by the Niagara Paper Mills, Lockport, N. Y., illustrating the Sultan cover paper that has proven so popular in this market. Bradner Smith & Co., in representing this line, are finding it a durable and attractive cover for a number of varied uses.

Chicago paper men are much interested in the fact that W. E. Randall, vice president of the Champion Coated Paper Company, Hamilton, Ohio, has a yacht entered in the annual cup race to Mackinac Island. The yacht *Malabar* proved its worth last year and is expected to repeat in good style in the race to be held July 28. Mr. Randall and his sons, who form a goodly part of the crew, have been in Chicago several days getting ready for the sports event.

James Nelson, of the Central Topeka Paper Company, Topeka, Kansas, accompanied by his wife and son and daughter, stopped in Chicago several days en-route to Topeka after an interesting motor trip.

Irving McHenry, president of the Mid-States Gummed Paper Company of Chicago was a visitor in New York last week. The Mid-States Gummed Paper Company is reported as having greatly increased success in the sale of Green Core Gummed Tape over the sales of last year.

Bob Butterworth, Chicago offices of the Champion Coated Paper Company, has returned from his vacation in the east. Mr. Butterworth and his wife spent some time back in the neighborhood where the popular Champion salesman grew up.

C. E. Schoff of the San Antonio Paper Company, San Antonio, Texas, will be in Chicago next week to visit friends in various paper houses. Mr. Schoff makes an annual trip to this section of the country taking a few days to see Chicago friends and visiting his mother and brother in St. Joe, Michigan. It is reported that Mr. Schoff will also take a part of his vacation on the lakes around Spirit Lake, Iowa.

First Shipment of Kraft Up Mississippi

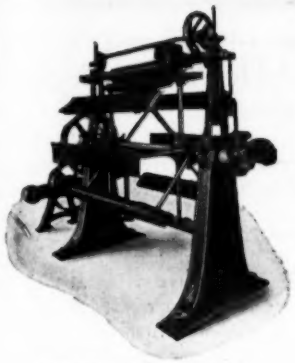
The first water shipment of kraft paper by International Paper Company up the Mississippi and Ohio Rivers has just left Monroe, La., for Wellsburg, W. Va. The shipment consists of a barge carrying twenty-four freight car loads of Gator Hide kraft paper made at the Bastrop, La., mills of the company to its Wellsburg mill for conversion there into multi-wall cement bags.

It is expected that this is the beginning of regular water shipments of kraft paper by the company not only to Wellsburg, but to Cincinnati, Pittsburgh, and other river ports. This water movement of paper should add to the volume of business carried on in these cities.

The company owns two kraft paper mills at Bastrop, La., one at Camden, Ark., another at Moss Point, Miss., and a fifth under construction at Mobile, Ala. On the completion of the new Mobile mill, the company will have five modern mills with a capacity of 700 tons of kraft paper a day. The company, it is said, is already the largest manufacturer of kraft paper in the world.

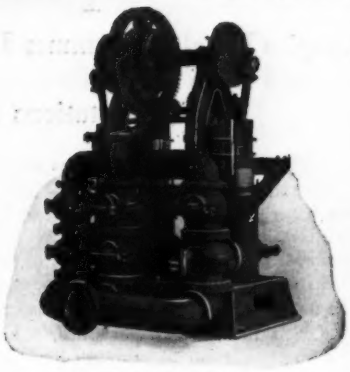
Final Report on Berkshire Mills Co.

PITTSFIELD, Mass., July 31, 1928.—Judge William A. Burns, in Superior Court, Thursday, allowed the fifth and final report of Attorney John F. Noxon, Jr., special master in the case of the First National Bank of Boston against the Berkshire Mills Paper Company of Adams, Mass., and the court ordered payments to be made as follows:—To the First National Bank of Boston, $1,000 for services rendered as trustee; to Ropes, Gray, Boyden & Perkins, $2,044.95 for services as counsel for trustee; to Attorney Walter J. Donovan of Adams, $1,576.28 as counsel for trustee; to himself as special master, $1,662.19 as pay and for expenses and also an additioned $400 for expenses as special master; to the Town of Adams, $30,000 in full payment of any claims of the town against the property of the company; to Noble B. Turner of Great Barrington, Mass., and Alice H. Harrington of Adams, as assignee of Henry L. Harrington, in full satisfaction of their claims as mortgagees, $3,750.



Automatic Collapsible Reel

Safety Steam Joint

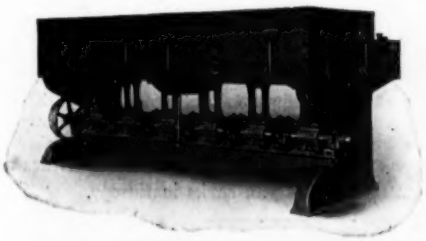


Triplex Stuff Pump

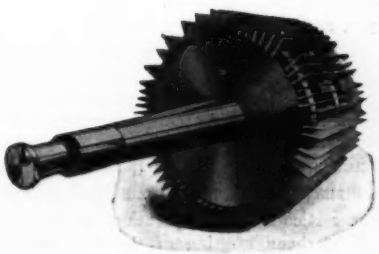
Get Our Bid

WHEN you need any paper mill machinery, get our bid, but don't buy on a basis of price alone. Compare designs and construction before buying. ¶ Remember, we make a complete line of equipment, including Fourdrinier and Cylinder Machines. ¶ Ask for details and a bid on whatever you need. Bulletins on any product sent on request.

DOWNINGTOWN
Manufacturing Co.
Downingtown, Pa., U.S.A.



Diaphragm Screen



Bandless Beater Roll

Six Shaft Compensating Winder

Boston Paper Market Experiences Quiet Period

Despite Usual Midsummer Lull, Improvement is Reported in Some Lines—Box Board Business Said to be Particularly Good for Time of Year—Kraft in More Desirable Position, With Quotations Firmer—Fine Paper Trade Rather Flat at Present

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., July 30, 1928.—"Midsummer quiet" prevails in the paper market, although in some lines improvement is noted to a certain extent. While sales have been made in fine paper, this commodity is not generally active, one member of the trade characterizing it as "flat." More interest, however, is expected in the not far distant future. Kraft is in a more desirable position, as far as the price is concerned, although a prediction is made that there will not be so much buying at the time of year when a good volume of buying usually takes place because some consumers placed their orders during the recent price confiict.

Boston box board dealers report further improvement in their commodity, particularly good for this time of the year. The shoe business has picked up materially and orders for candy for the fall and winter trade are being placed, all of which calls for boxes, and consequently for box board. A few of the local box crafters are enjoying a particularly good business in set-up lines. The United Paperboard Company is operating well in the mills now running and preparations are being made to begin work in another which had been shut down for repairs.

In some quarters of the market it is stated that rags and paper stock were quieter than expected during July. Dealers, however, are hopeful for greater activity before long. There have been a few price changes during the week. Book and magazine stock has tended to decline. No. 1 book stock, heavy, is reported to have sold at $1.45 to $1.60 per 100 pounds, delivered mill. On the other hand, mixed papers are a little stiffer, selling up to .52½ f. o. b. Boston. The previous high side of the range was .50. The low side, however, continues at .47½. Other grades of waste remain at about the same levels. Roofing rags are firm and scarce with indications pointing to higher prices.

Carter Rice Organization Changes

Carter Rice & Co. Corporation have been making changes in the organization. The concern had formerly operated with its branches as separate units. There are now three departments—purchasing, merchandising, and sales. Those in charge are as follows:

William J. McLellan, purchasing agent; Robert H. Walsh, assistant purchasing agent; Ashley E. Crowell, merchandising manager, and James Murray, assistant merchandising manager.

Herbert S. Brown, who has been sales manager for the last three years, has taken over all the correspondence. Mr. McLellan was formerly the head of the cardboard department, Mr. Walsh assistant in the white paper department, Mr. Murray assistant in the manila department, and Mr. Crowell manager of the manufacturing department. Joseph E. Canning succeeds Mr. Crowell as manager of the manufacturing department. All have been with Carter Rice & Co. Corporation for a considerable period.

A luncheon meeting of the Fine Paper Division of the New England Paper Merchants Association was held at the Chamber of Commerce, July 25. Matthew O. Byrne, president of the New England Paper Merchants Association, presided.

Arthur E. Ham & Sons are stocking a new line of fancy blotting, Floradecko, made by the District of Columbia Paper Company, Washington, D. C.

The Pratt Paper Company has secured the agency in Massachusetts and Rhode Island for the Union Watermark Papers.

The Mason Box Company, Attleboro Falls, Mass., resumed operations today after the annual shutdown of a week.

Sidney Mitchell, president of the United Paperboard Company, was a recent visitor in Boston, calling at the local office of his company.

Dill & Collins announce Stone & Andrew as distributors in Boston and adjacent territories of their high grade papers which are being stocked by them for immediate delivery. There are now two houses handling in Boston and New England the products of Dill & Collins, "Master Makers of Printing Papers."

E. M. Davenport, treasurer of the Spaulding and Tewksbury Company, is at Southwest Harbor, Me., for a vacation during August. T. M. Dix, one of the vice-presidents of the same company, returned today after a vacation during July on his farm at Sandwich, N. H.

Capt. G. C. Eastman, of the S. A. Eastman Company, paper box manufacturer, Milford, Mass., has been at Camp Devens for two weeks.

Albert Eckert, secretary of the George M. Graves Company, is enjoying a vacation.

Herbert T. Smith, formerly salesman for the McKenzie Engraving Company, has taken a similar position with the Century Paper Company. Mr. Smith was previously with the Jordan Card and Paper Company, and later with the Lester P. Winchenbaugh Company.

Alfred Schwarz, of the firm of that name, Berlin, Germany, and Albert T. Hicks, of Daniel M. Hicks, Inc., New York, called on the trade last week.

Bird & Son, Walpole, Mass., have announced a new product, Bird's Insulating Board. The board is composed of low-density fibrous materials. Between the outside layers are two corrugated sheets, so designed that they provide a very large number of small dead air spaces, increasing the insulating values of the board.

The Worcester Paper Box Corporation, Medford, Mass., has been incorporated to manufacture and otherwise deal in paper, cardboard and stationery of all kinds. The capital is 1,000 shares no par stock. The incorporators are Hannah Z. Posner, Medford, Anna E. McGrath and Bartholomew J. Murphy, both of Worcester, Mass.

Robert A. Jordan, grandson of Col. J. P. Jordan, of the Jordan Card and Paper Company, Boston, was on board the *Nina*, the winner of the Queen Victoria cup in the 3,033 mile transatlantic yacht race, when the boat crossed the line at Santander. Mr. Jordan, Harvard 1926, was a roommate at college of Columbus O. Iselin, son of Commodore Iselin, of New York. For the last few summers, with others, he has cruised on one of the commodore's boats in the lower St. Lawrence and along the Labrador coast. He is now with Iselin & Co., and after the festivities are over at Spain, he will visit the Iselin banks in Europe.

Cost Accountants Visit Gardner-Harvey Plant

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, July 30, 1928.—Members of the Dayton chapter of the National Association of Cost Accountants traveled to Middletown the past week and took a trip through the Gardner-Harvey paper plant at the invitation of the Middletown organization.

Tom Harvey, official of the company, delivered an address to the assembled members following their trip through the factory. He discussed "Paper Making," describing methods used in the last one hundred years. Dinner was served the accountants at the Middletown Y. M. C. A.

Modern Engineering Answers the Call for Lower Costs in News Print*

By A. E. Buchanan, Jr.[1]

Practical! That is pre-eminently the word which characterizes the new mill of the Ste. Anne Paper Company, Ltd., at Beaupré, Quebec. Designed and built specifically to operate profitably during the period of close competition in the news print industry, this plant is a model of skillful design and sound engineering against a background of long, practical paper-making experience. An inspection of th... calls the conception ... neering concern are said to total $180,000,000 and its productive capac... is close to 1,000,000 tons of news print per year. Th... machines of the Ste. Anne mill are producing 240 to... at present, at a speed of 950 feet per minute. Since ... are designed for speed up to 1,400 feet, t... should be well over 300 tons of ... Pulpwood in 4 ft. le...

Clipping from
Paper Trade Journal
June 28, 1928

and again—

Ross Systems Specified for Heating and Ventilating!

The Ste. Anne Paper Mill Ltd., at Beaupre, Que.,—designed and built to operate profitably—considered the utilization of waste a big factor towards insuring lowered costs and increased profits.

Their practical experience in paper making had proved the efficiency and economy of installing heating and ventilating apparatus of sound engineering design. And to Ross engineers was given the responsibility for this important part of their equipment.

Ross Systems are always specified where lower production costs are the objective. They are providing the same proportionate savings to the small mills, as to the largest, throughout the paper making industry.

Write For Catalogs and Bulletins

Catalog No. 10
A 48 page book.
Heating and Ventilating
The Machine Room.

Bulletins 11 and 12
"Briner Economizers"

Bulletin No. 13.
"Ross Vapor
Absorption System"

Bulletin No. 14.
"Ross Grinder
Exhaust Systems."
16 pages illustrated.

J. O. ROSS ENGINEERING CORPORATION

208 W. Washington Street
CHICAGO

30 E. 42nd Street, NEW YORK
Main Office

303 Lumbermens Bldg.
PORTLAND, ORE.

ROSS ENGINEERING OF CANADA, LIMITED
NEW BIRKS BLDG., MONTREAL

ROSS SYSTEMS
HEATING—VENTILATING—DRYING

Canada's Oldest Paper Mill to Expand Output

Adams Cellboard Co. Will Concentrate on Straw Board Manufacture at Greensville After Closing Down Toronto Plant—Greensville Mill Had Distinction of Receiving Award From Dominion Government as First Mill to Make Writing Paper 120 Years Ago

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., July 30, 1928.—After operating for over twenty years the Toronto plant of the Adams Cellboard Company, Ltd., 5 Dumfries street, Toronto, manufacturers of paper and cellboard boxes and corrugated paper, is about to close down, the company having decided to concentrate on the manufacture of strawboard at its factory at Greensville, Ont., a short distance from Hamilton. The mechanical equipment has been sold to the Kitchener Paper Box Company, Ltd., and other paper box making concerns, and as soon as the mill is dismantled it will be devoted to another line of commercial activity, the Adams Cellboard Company having leased it for a term of years, with the option of a purchase to another organization.

The closing down of the Toronto plant recalls several interesting facts in connection with the Adams Cellboard Company and the manufacture of paper in Canada. The president of the concern is Charles E. Colgrove, who was the first man to manufacture paper freight boxes in Canada. This was twenty-four years ago and it was from that start that the Adams Cellboard Company's operations originated at the beginning of the present decade. The mill at Greensville was taken over by Mr. Colgrove during the war and it enjoys the distinction of being the oldest paper mill on the continent, it having been awarded a bonus from the Dominion Government as the first mill to manufacture writing paper 120 years ago. Mr. Colgrove was attracted to the site for board manufacture by reason of the excellent water power available in Spencer Creek. It is ideally located for strawboard manufacture, practically all of the straw being delivered to the mill direct by farmers in the district. It is Mr. Colgrove's intention to expand the Greensville mill considerably in its production of strawboard and he himself will handle the sales end of the industry from Toronto where he will continue to reside. The Adams Cellboard plant has been looked upon as an institution in Toronto for many years and its passing is an event of importance in paper box and board manufacture in Canada.

Manitoulin Pulp Co. Increases Production

Built in 1925, and with a capacity of about 30,000 pounds of dry pulp per 24 hours, the mill of the Manitoulin Pulp Company, at Kagawong, Ont., has recently increased its capacity until it is now averaging 40,000 pounds of dry pulp per 24 hours. The mill uses spruce exclusively and manufactures a very high grade of groundwood pulp for catalogue paper. This pulp is shipped to the United States during the summer months, being stored and accumulated during winter operations. In the manufacturing process the mill utilizes two four-pocket grinders, three wet machines and the necessary wood room operations for cutting and barking the wood. Water power from Kagawong Lake, a mile and a half distant, is brought down the river, thence down a penstock half a mile to the mill which operates a 1,400 h.p. water wheel for the grinders, and 150 h.p. generator for the operation of motors that drive the other machinery of the plant. The plant is owned and operated by the Little Rapids Pulp Company, Little Rapids, Wisconsin.

Pests Attack Ontario Forests

Government airmen are engaged in spraying forests, just as farmers on a smaller scale spray their orchards. A few weeks ago Pilot Hector Ptolemy set out from Sault Ste. Marie to wage war against spruce worms, which were destroying large tracts of spruce in Northern Ontario. Now the "hemlock looper" is attacking the territory of Lake Joseph in Muskoka. The situation is becoming worse of late, and a carload of calcium arsenate has been sent up. A large area is affected around Foote's Bay, where there is only hemlock. Much timber around summer homes is affected and the Dominion Government has sent up an entomologist to investigate. The "looper" is a caterpillar an inch in length and he travels by looping his body. Where he came from is a mystery, but his taste for hemlock is pronounced. West of Sudbury, where the spruce bud worm attacks the green shoots of the balsam and spruce, the airplane is also used as a means of offensive. This year the Federal, Provincial and Spanish River Pulp and Paper Company forces have been co-operating to exterminate the pest.

New Brunswick Pulp Co. Loses Suit

Word received in Toronto a few days ago is to the effect that the decision of the New Brunswick Supreme Court in the case of the New Brunswick Power Commission *vs.* the Inglewood Pulp and Paper Company, was upheld by the judicial committee of the Privy Council in London, England. Their Lordships dismissed both the pulp company's appeal and the power commission's counter-appeal, both without costs. The case involves the amount of compensation the Power Commission should pay the pulp company for appropriation of lands. The New Brunswick Supreme Court, appeal division, has added five per cent interest and $6,000 for fishing rights to an arbitrator's figure of $42,500. The company claimed upwards of a million dollars, while the Power Commission wanted the original arbitrator's figure adhered to.

Abitibi Makes Promotions

Announcement has been made by the Abitibi Power and Paper Company at Iroquois Falls, Ont., that H. J. Buncke, chief engineer of the Iroquois Falls Division, has been appointed chief engineer of the entire group of mills of the company. Mr. Buncke joined the company in 1916 and has been with the firm ever since. R. T. Steedman, who has been with the company since 1925, has been appointed sulphite superintendent, formerly having been an engineer.

J. G. Lethbridge, Ontario Progressive Leader, who with a party of his group supporters has been having a ten-day trip through the northern section of Ontario, has nothing but bright words to use in his description of the great natural resources up there and of their visit to a number of the big pulp and paper plants. These included an inspection of the Iroquois Falls plant of the Abitibi Power and Paper Company and the Kapuskasing plant of the Spruce Falls Pulp and Paper Company. Both of these mills have a capacity of 500 tons of news print each per day. From Kapuskasing the party was taken to Smoky Falls, on the Matagami River, 100 miles from James Bay, where the Spruce Falls Company generates 75,000 horse power for its own use and the use of the town of Kapuskasing. The tour of the north was personally conducted by Col. W. R. Smyth of the Northern Development Department of the Ontario Government.

The sale of 43,500,000 feet of timber, chiefly red and white pine, in the Rainy River District of Ontario, at prices "most satisfactory to the Department," was announced at Queen's Park in Toronto, by the Hon. William Finlayson, Minister of Lands and Forests, this week. J. A. Mathieu, Ltd., of Fort Frances, bought 3,500,000 feet of timber in what is known as Berth 41, paying $10.55 per thousand feet board measure for red and white pine, and $6.50

A Successful Paper Mill Manager Wanted

One of the largest international organizations, which is about to establish a manufacturing plant in eastern U. S., requires a successful paper and board mill manager.

The man we want must have a successful record as a practical paper mill manager, familiar with the processes of manufacturing paper and pulp, and capable of cooperating with our technical department in establishing a new plant.

The man we desire must have high *executive abilities,* combined with practical paper and board making experience, technical knowledge, and preferably should be a graduate engineer.

This man's age is preferably around forty, giving him a background of experience, but at the same time room for future growth with this new organization.

The man we are looking for is now perhaps associated with a paper or board manufacturing company, but wants an opportunity to accomplish bigger things in keeping with his capacities.

We will pay such a man a compensation commensurate with his abilities.

The position offers splendid opportunities, but the *experience, ability* and *moral standards* of the man we select must be very high, and references will be most thoroughly investigated.

We are very anxious to get in touch with the proper executive *immediately,* so that no time will be lost in energetically and rapidly equipping and organizing the first unit of our new Company.

Time and speed are essential factors, consequently the man we choose must have had proven experience in selecting all equipment and personnel.

Give fullest details in first letter, which will be kept strictly confidential.

Employees of our organization are aware of this advertisement.

Address, BOX 28-519, care PAPER TRADE JOURNAL

per thousand feet board measure on the stump for jack pine. The other 40,000,000 feet—in Berths 32 and 43 and three smaller areas—went to Shevlin-Clarke, Ltd., prices ranging from $10.55 per thousand feet board measure in the small tracts to $12.13 in the larger areas. The two companies, the Department states, required fresh timber for their Fort Frances plants. The sales to them are simply in keeping with the Government's policy of encouraging practical and established industry.

Established New Flying Record

In maintaining its intensive vigil over Ontario's forest wealth, the Ontario Government flying service, under the direction of Capt. Roy Maxwell, is knocking old records into every kind of a cocked hat these days. For instance, the service record for a single day's flying has been broken four times this season. A month ago Bill Lyons, son of the Hon. James Lyons, former Minister of Lands and Forests, flew 14 hours and 15 minutes one day to set a record that none dreamed ever would be reached again. Latest reports from the Sault base, however, show that not only has Lyons' mark been reached, but it has been beaten by fifteen minutes. Pilot Alec Harvey is now the man of the hour. This pilot, trained in the Ontario service, flew his day's work in the Pine Ridge district, starting at 3 o'clock in the morning and winding up at about 9 o'clock at night. To date this year the service has flown 3,000 hours, or 1,500 more than it flew in the corresponding period last year.

Practically all of the members of the staff of the Ratcliff Paper Company, wholesale paper dealers, York street, Toronto, enjoyed their summer holidays at the one time. About four years ago a plan was inaugurated of allowing everybody in the office and warehouse to go on their vacations at the quietest period of the summer trade instead of having business disarranged by various members being off at different times. The method has worked out so well that it has now become fixed and the members of the staff are all pleased with the arrangement. Only one or two people are left in the plant to look after orders.

Winding Up of Fort William Paper Co.

Upon the application of H. H. Davis, K. C., Justice Orde in Toronto a few days ago granted an order for the voluntary winding up of the Fort William Paper Company, Ltd., pursuant to a resolution passed by the shareholders on June 23. This follows upon the amalgamation agreement between the Abitibi Power and Paper Company, Ltd., and the Fort William Paper Company. Affidavit of the secretary discloses that the Abitibi company owns the entire common stock of the Fort William Paper Company and undertakes to pay off the 7 per cent preferred stock of the latter company.

Ottawa Valley Cut Falls Off

The lumber and pulpwood cuts in the Ottawa Valley during the present season will be much smaller than last year owing to a number of reasons, among them that the Edwards Lumber and Pulp Company and the Hawkesbury Lumber Company have sold to the Laurentide-Ottawa Paper Company and in the case of the Pembroke end no production will be made this year. Owing to the extreme high water on the Ottawa River, sorting and driving of logs to the mills was greatly delayed, no sorting having been possible until the middle of June as compared with ordinary years in which this starts with the opening of the river. It is also pointed out that the plants of the Hawkesbury Lumber Company, Hawkesbury, and J. R. Booth, Ltd., Ottawa, were closed down about three weeks this season. It is estimated that the total output in the Ottawa Valley will be only about 150,000,000 feet this season. Stocks, on the other hand, are less than a year ago and the volume of shipments greater than in 1927. Eastern Ottawa Valley manufacturers report that owing to the unwarranted low prices made by the Pacific coast woods, local prices have not been remunerative.

An announcement of interest to Ontario paper makers was made by the Ontario Department of Health a few days ago when it was stated that the wrapping of all bread sold in the province would be compelled just as soon as a suitable paper could be devised by the Department. That time, it is understood, is not far distant. Officials of the baking institute at Guelph have been experimenting for some time on the matter and have about produced a wrapping paper that will meet all sanitary requirements, and at the same time effect no change on the taste of the bread, mildew it or render it less nutritious. At the present time only 12 per cent of the bread sold in Canada is wrapped.

Notes and Jottings of the Trade

N. E. Wainwright, in charge of the export department of Provincial Paper, Ltd., head office Toronto, has gone on a holiday trip to points on the Atlantic Coast of Canada.

George C. Winlow, sales manager of the Lincoln Pulp and Paper Company, Toronto office, was in Montreal this week attending a meeting of the standardization committee dealing with the weights, measurements and grades of papers.

F. S. Duncan, treasurer and general manager of Provincial Paper, Ltd., has returned to Toronto after a visit to the Port Arthur Division of the company's manufacturing operations.

A number of the Toronto wholesale paper men took part in a golf tournament staged a few days ago by the Sales Club of the Toronto Typothetae at the Cedarbrook Golf and Country Club.

J. G. Emery, eastern representative of the Lincoln Pulp and Paper Company, is holidaying at his cottage in the Muskoka region.

The Toronto Club of Printing House Craftsmen held their anuual picnic at Exhibition Park on Saturday, July 28, several hundred of the members and their friends participating in the happy event.

T. J. Macabe, of the Buntin Reid Paper Company, Toronto, was in Montreal on business last week.

H. F. G. Kent, of the W. J. Gage Company, Ltd., has returned after a holiday spent at his summer home on Georgian Bay.

George W. Pauline, president of Ritchie & Ramsay, coated paper manufacturers, Toronto, has left for England where his father, George Pauline, died recently. Mr. Pauline, Sr., was for years identified with the Fletcher Paper Company in Manchester, and in this capacity as an Old Country mill representative paid many visits to Toronto. He had been in poor health for some time and was 72 years of age.

The Hawk Lake Lumber Company, of Cochrane, Ont., of which A. E. Wicks is president, take out a large quantity of pulpwood every year, but report that the market is somewhat dull now due to the existing quietness in the paper trade. The company says that the mills are looking forward to record supplies being purchased later on, but in the meantime none of the mills are in a hurry to purchase owing to the heavy holdings on hand from previous orders.

At a meeting of the standardization committee of Toronto and Montreal printers, lithographers and wholesale paper dealers, with paper manufacturers, in Montreal a few days ago it was decided that a small sub-committee should make a draft of the various recommendations for submission to the associations concerned and the consumers in the line of standardizing the weights and sizes to be turned out by the paper mills and handled by the paper wholesalers and allied trades. In the meantime the consumers generally will be thoroughly canvassed. Three meetings of the industries concerned have already been held and the prospects for an early agreement between the interests concerned are bright.

O. A. Porritt, president of the Hastings Paper Mills at Belleville, Ont., and former vice-president of the Canada Paper Box Company, Ltd., has been appointed director of the Consolidated Laundries, with the management of the Belleville unit in his charge. This will be one of a chain of power laundries recently formed.

Edward Franklin, well known in paper and lithographic circles in Toronto, died a few days ago at the age of 62 years. At the age of fifty years he enlisted in the Canadian overseas forces in the Great War and spent his 52nd birthday in the trenches at Hill 70.

Operation-Saving and Profit-Earning

A direct result of operating the Voith Inlet. In saving operation costs—turning them into profits—better paper is produced.

These are the facts revealed by a study of cost sheets in any mill operating the Voith Inlet on either the Straight Fourdrinier, Harper or Yankee machine.

—and the operation savings are shown in more than one item. There's the item of wires. From 10% to 15% longer life is added. No more complaints on paper not being uniform in caliper, is another result noted. Fewer shutdowns of machines from breaks—fewer lumps and foam spots are more items checked for the Voith Inlet—and more wire surface is now being used for formation purposes.

All very important items in operation-saving. This profit-earning of the Voith Inlet makes it today a very necessary piece of equipment for mills who want to net a return on the year's operation. Repeat orders from mills using Voith Inlets prove this.

More about the Voith Inlet and its performance in 115 mills will be sent you upon request. Write today.

VALLEY IRON WORKS CO.

Machinery for Paper and Pulp Mills

APPLETON WISCONSIN

New York Office: 350 Madison Avenue

Western Manufacturing & Sales Division
Smith & Valley Iron Works Co., Portland, Ore.

Waxed Paper Manufacturers Meet

The American Waxed Paper Manufacturers held their annual summer meeting at Hamilton, Ontario, July 13 and 14. This meeting has become an annual event with the waxed paper manufacturers of the United States and each year the attendance grows larger, and a more enjoyable program is offered to the representatives attending.

The meeting combines business with pleasure, and the spirit of good feeling which prevailed is quite indicative of the growing relationship of good will between and among the waxed paper manufacturers. The Appleford Paper Products, Ltd., of Hamilton, Ontario, Mr. W. B. Powell, manager, acted as host to the American manufacturers and a most enjoyable program was arranged for them.

The business section of the meeting was held on Friday, July 13, and further developments in line with the program submitted recently before the Federal Trade Commission were accomplished. At this meeting the association welcomed as new members the Otsego Waxed Paper Company, Karl R. Zimmer, manager, and the Union Waxed Tissue Paper Company, E. W. Kelley, president.

Standard Contract Developed

After considerable discussion, a tentative form of standard contract for use by all American waxed paper manufacturers was developed and, when re-written, will be submitted to the representatives for final approval. The standard contract is designed to eliminate ambiguity in contracts as well as to provide for the protection of both manufacturer and buyer, in that specifications are given in detail and in a more satisfactory manner than heretofore, and in a manner which is binding on both parties.

Uniform cost reports, as submitted by the members, were discussed and the general methods were in line with the aims of the program of the association. It was decided by the manufacturers present that a meeting of the cost accountants and others from the various companies should meet in Kalamazoo, Michigan, during August to further provide for more accurate cost reports and to be instructive to the attending cost men in the development of these cost reports in a manner which would be comparable because of this uniformity or similarity in accounts.

The question of standardization and simplification for the waxed paper products was discussed in detail. Because of the division in waxed paper products, as to their distribution, it was decided that this program should be divided into at least two separate divisions, and that the program for bread wrappers, which is now practically ready for a final meeting, should be completed first, and that following this the same process should be taken to secure standardization for lunch rolls, flat tissues, etc., providing that section of the industry became sufficiently interested to cooperate with the association in such a procedure. As a result the standardization of bread wrappers will be presented to the Department of Commerce, Bureau of Standardization, early next fall.

Statistical Reports

A general discussion of statistical reports, credit reports, and other similar reports was most enlightening to the members and Mr. Hanway, manager of the association, presented a complete analysis, which showed in detail just how the various members had been cooperating in reports, replies to questionnaires, etc., during the past six months. The developments at the meeting proved that the returns in value from the association come mostly to those who made use of the advantages from cooperation with its manager in the development of useful information. The Bureau for Trade Marks, Trade Names, Copyrights, etc., as a new section of the association's program was discussed and approved.

The matter of ink coverage, which is one of the real problems of the waxed paper industry, was presented very clearly and concisely by R. A. Hayward of the Kalamazoo Vegetable Parchment Company, together with a plan for estimating ink coverage and charges therefor, in a manner equitable to buyer and seller. The meeting adjourned following a rising vote of appreciation to W. B. Powell, host for the gathering.

On Saturday, July 14, a golf tournament was held, and in the evening a dinner dance for the attending representatives and their wives was given at Niagara Falls. The special programs for the ladies, combined with dinner dances and other features, provided a most enthusiastic and delightful meeting during the session, and the manufacturers returned with the feeling that its annual summer meeting had been the most successful on record, and that it was established as a permanent fixture in the association's program.

The attendance follows: J. T. O'Rourke, American Bread Wrapper Company; Emile Frisch, American Bread Wrapper Company; W. B. Powell, Appleford Paper Products, Ltd.; A. F. Gluck, Coated Paper Products Company; R. B. Donnelley, Central Waxed Paper Company; J. D. Goldberg, Hamersley Manufacturing Company; R. A. Hayward, Kalamazoo Vegetable Parchment Company; G. H. Gardner, Menasha Printing and Carton Company; E. A. Meyer, Menasha Printing and Carton Company; E. A. Clark, Nashua Gummed and Coated Paper Company; W. J. Eisner, Newark Paraffine and Parchment Paper Company; Mr. Palmer, Ohio Waxed Paper Company; B. H. Ballard, Warren Manufacturing Company; Mr. Donohue, Warren Manufacturing Company; C. R. Wright, Waterproof Paper and Board Company; Karl Zimmer, Otsego Waxed Paper Company; Mr. Marshall, Nashua Gummed and Coated Paper Company, Canadian Division; S. J. Frame, secretary, Canadian Waxed Paper Association; H. H. Turner, Deframe Paper Company, Niagara Falls; W. H. Howe, Mumford Paper Mills; E. W. Kelley, Union Waxed Tissue Paper Company; Franklin D. Jones, Davies, Jones & Beebe; P. S. Hanway, manager, American Waxed Paper Association.

Paper Directory of All Nations

The thirty-seventh annual edition of the Paper Makers Directory of All Nations, published by Dean & Sons, Ltd., Debrett House, 29 King Street, Covent Garden, London, W. C. 2, England, is ready for distribution.

This Red Book of the Paper Industry gives detailed particulars regarding the paper, pulp and board mills of the world, such as location, production, number and width of machines, tonnage output, power used, telegraphic address, etc., as well as lists of British wholesale stationers, paper merchants, waste paper merchants, rag merchants and paper stock dealers, china clay producers and merchants, cardboard box manufacturers, paper bag makers, paper agents and the mills they represent; the mill productions. too are classified under 400 trade headings, alphabetically arranged as to country, product, and mill.

This directory includes hundreds of trade advertisements of firms in England and abroad, indexed both alphabetically and in classified form, so that it is of special importance to those connected with the paper trade, not only as an International trade directory, but also as a buyers' guide.

Whitaker Paper Co. Increases Earnings

[FROM OUR REGULAR CORRESPONDENT]

CINCINNATI, Ohio, July 30, 1928.—A statement issued today by the Whitaker Paper Company for the six months ended June 30 showed earnings of $143,096 after paying all charges, taxes and two quarterly preferred dividends, equal to $4.66 a share on common stock that is outstanding. This compares with $3.20 a share, or $98,075, in the same period in 1927.

The Whitaker Paper Company has shown a consistent increase in its earnings during the past several years.

We Plan~ You Profit

Albany designed *Tops and Bottoms will help your board machines* produce!

Year after year Albany designers have been planning felts for profitable production .... year after year they have been developing a new technique in wool blending and weaving for utmost efficiency .... and value-wise mill executives have been reaping the benefits.

Albany's effort is not concentrated on the felts alone. The conditions under which the felts must run figure high in the calculations. Top and bottom positions on different board machines vary. In planning felts for these positions, Albany designers allow for these variations, with a skill bred of cumulative years of experience.

*Every order for an Albany Felt is a "special order". Every Albany Felt is "tailor-made" to fit specified conditions on the definite machine and position for which it is individually designed.

The result .... porosity, speed, finish, stamina, all planned before a single thread of yard is spun. And that, after all, is the *only* way to eliminate guesswork and chance-taking.

Make your machines profit producers .... specify Albany "Tailored-Made" Felts.

ALBANY FELTS

TAILOR-MADE BY ALBANY FELT COMPANY, ALBANY, NEW YORK

AFAFAFAFAFAFAFAFAFAFAFAFAFAFAF

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Green Bay, Wis.—The Northern Paper Mills, Inc., Day street, is said to have preliminary plans under way for a new building at its plant of extensive proportions, to be used primarily for storage service, reported to cost more than $40,000. W. A. Kelly is manager.

Lyons Falls, N. Y.—The Gould Paper Company is said to be planning early rebuilding of portion of pulp mill destroyed by fire July 20, with loss reported at close to $100,000, including equipment. Plant is located at Gouldtown, about one mile from Lyons Falls.

Wisconsin Rapids, Wis.—The Consolidated Water Power and Paper Company is reported to be arranging immediate construction of proposed new addition to its mill for which plans recently were approved, to be equipped as a finishing room.

Sturgis, Mich.—The National Carbon Coated Paper Company will ask bids early in August for its proposed new plant addition, to be two-story, reported to cost about $60,000, and will proceed with superstructure at early date. Billingham & Cobb, 211 Woodward avenue, Kalamazoo, Mich., are architects and engineers. D. A. Hopping, company official, is in charge of project.

Dallas, Tex.—The Southwest Ticket and Coupon Company, recently organized by Charles S. Mitchell and A. D. Webb, with capital of $50,000, is said to be arranging for early operation of local plant for production of paper specialties.

Seattle, Wash.—The Seattle Pulp and Paper Mills, care of Tom Taylor Company, Dexter-Horton Building, is said to be completing financing under direction of company noted for its proposed new pulp and paper mill in the vicinity of the municipal airport on the Duwamish waterway. Initial unit will be two-story, approximating 400 x 600 feet, designed to develop a capacity of about 100 tons per day. Plans are under way and it is understood that construction will begin within the next 90 to 100 days. It is reported to cost in excess of $2,000,000, with machinery. Joseph Kaster, Sr., is president.

Ozone Park, L. I., N. Y.—The Public Bag and Paper Company, recently organized with capital of $20,000, by S. S. and A. B. Ralph, 105 Ninety-third street, Ozone Park, is said to be planning early operation of new factory in Queens Borough, for manufacture of paper bags and containers.

Appleton, Wis.—The Appleton Coated Paper Company, North Meade street, has closed bids on general contract for its proposed new mill addition, and will soon make award. It will be one-story and basement, 107 x 240 feet, estimated to cost about $130,000, with machinery. Lockwood, Greene & Company, 400 North Michigan avenue, Chicago, Ill., are architects and engineers.

Trenton, N. J.—The Middlesex Paper Tube Company, Lowell, Mass., has concluded negotiations for a lease of a portion of former local plant of the Mercer Automobile Company, and will remodel and equip for a new works for the manufacture of paper and cardboard tubing, and kindred products. Machinery will be installed and made ready for operation at early date, and working force recruited. Estimated cost has not been announced.

Mobile, Ala.—The International Paper Company, 100 East 42nd street, New York, has surveys in progress for its proposed new local mill for the production of kraft paper and will begin grading at early date. The company is said to have approved plans for the following units: main mill, one-story, 100 x 780 feet; machine shop, 58 x 120 feet; wet room, 98 x 121 feet; evaporating room, 97 x 98 feet; recovery room, 113 x 200 feet; lime recovery department, 20 x 120 feet; general supply house, 50 x 140 feet; salt cake storage department, 45 x 120 feet; lime storage department, 45 x 90 feet; settling and filter room, 65 x 120 feet; and several smaller structures, all of one-story type. Entire project is estimated to cost close to $3,500,000, and will provide for an output of approximately 175 tons of finished stock per day.

Detroit, Mich.—The Vecar Paper Products Company, 725 East Fourth street, Royal Oak, Mich., care of J. F. Davis, 13541 Woodward avenue, Detroit, recently organized by Mr. Davis and associates, with capital of 100,000 shares of stock, no par value, is said to be planning early operation of plant for manufacture of paper goods. Donald Russell and W. J. Watkins, Highland Park, Detroit, are also interested in the new organization.

Cedar Rapids, Iowa—The Kilborn Photo Paper Company, 116 First avenue, East, has awarded a general contract to Max Mildenstein, Merchants National Bank Building, for its proposed new plant at First avenue and Twenty-ninth street, East, to be two-story, 60 x 165 feet, brick and steel type, with steel sash and other fireproofing. It will cost approximately $40,000, with equipment. Norman Hatton, O. R. C. Building, Cedar Rapids, is architect.

Philadelphia, Pa.—The Philadelphia Fibre Box Mill, Vandalia street, has begun superstructure for a proposed new unit, to cost approximately $35,000, and proposes to have structure ready for occupancy at early date. It will be used for storage and distributing service.

Baldwinsville, Mass.—The A. L. Adams Paper Company is said to be arranging for award of general contract for a proposed new addition to its plant, to be two-story, 80 x 105 feet, estimated to cost approximately $50,000, with equipment, and will begin work immediately. Leo Shlick, 314 Beacon street, Boston, Mass., is architect and engineer.

Rhinelander, Wis.—The Rhinelander Paper Company has work under way on new additions to its plant for which general contract was let to the C. R. Meyer & Son Company, Oshkosh, Wis., recently, to consist of two main units for finishing room and power plant, respectively, reported to cost close to $250,000, with machinery.

Three Rivers, Que.—The St. Lawrence Paper Mills Company, Ltd., Montreal, Que., is said to have begun work on proposed new additions to its mill at Three Rivers, designed to increase output from 300 to 450 tons of news print daily. Project provides for a number of new units and is reported to cost approximately $3,000,000, with machinery. H. S. Taylor, 1111 Beaver Fall Hill, Montreal, is consulting engineer.

Helsingfors, Finland—A company in Finland is reported to have preliminary plans under way for the construction of a new sulphite cellulose mill, and will arrange estimates of cost, etc., at

If it requires a paper that is TOUGH & STRONG & MOISTURE-RESISTING

DISTRIBUTORS OF GATOR-HIDE KRAFT

Anniston, Ala.
Ordway Paper Company
Asbury Park, N. J.
C. G. Winans Company
Asheville, N. C.
Southern Paper Products Co.
Atlanta, Ga.
American Mills Company
Baltimore, Md.
Dobler & Mudge
Birmingham, Ala.
City Paper Company
Boston, Mass.
Whitney Brothers, Inc.
Fort Hill Paper Company
Brooklyn, N. Y.
A. E. Mac Adam & Co., Inc.
Buffalo, N. Y.
Mugler & Umlauf
Charlotte, N. C.
Charlotte Paper Company
Cincinnati, Ohio
Merchants Paper Company
Columbia, S. C.
American Mills Company
Dallas, Texas
Texas Paper Company
Dayton, Ohio
Buyer's Paper Company
Greensboro, N. C.
Old North State Paper Co.
Hagerstown, Md.
The Antietam Paper Company
Indianapolis, Ind.
Ostermeyer Paper Co.
Jersey City, N. J.
S. Safier, Inc.
Lancaster, Pa.
United Twine & Paper Co.
Little Rock, Ark.
Parlette Brothers, Inc.
Los Angeles, Cal.
Johnson, Carvell & Murphy
Louisville, Ky.
Miller Paper Company
Marion, Ind.
Osborn Paper Company
Memphis, Tenn.
Memphis Paper Company
Newark, N. J.
C. G. Winans Company
New York, N. Y.
Trinity Bag & Paper Co.
Paterson, N. J.
Ribbon & Ticker Paper Co.
Philadelphia, Pa.
Garrett-Buchanan Company
Mather Paper Co., Inc.
E. Latimer, Jr.
Portland, Maine
C. M. Rice Paper Company
Providence, R. I.
R. L. Greene Paper Co.
Reading, Pa.
Van Reed Paper Company
Rochester, N. Y.
Cramer-Force Company, Inc.
St. Joseph, Mo.
Sheridan-Clayton Paper Co.
St. Louis, Mo.
Orchard Paper Company
San Francisco, Cal.
Johnson Locke Mercantile Co.
Seattle, Wash.
Johnson-Lieber Company
Springfield, Mass.
H. W. Carter Paper Co.
Tampa, Fla.
Peninsular Paper Company
Trenton, N. J.
C. G. Winans Company
Tulsa, Okla.
Tulsa Paper Company
Winston-Salem, N. C.
Gray & Creech, Inc.

THE very paper you need is Gator-Hide Kraft. This strong-fibred, wear-resisting, tear-resisting Gator-Hide gives real *service.* It has proved its worth, under hard usage. Find out about Gator-Hide Kraft today.

"WRAP IT IN GATOR-HIDE"

Another Certified Product of

INTERNATIONAL PAPER COMPANY

Main Sales Office: 100 EAST 42nd STREET, NEW YORK CITY

Branch Sales Offices: BOSTON, CHICAGO, PITTSBURGH, ATLANTA, PHILADELPHIA

an early date. This information has been given by Frederick E. Lyon, Helsingfors, Commercial Attache, at that point for Department of Commerce, and is also available at Bureau of Foreign and Domestic Commerce, Washington, D. C., reference inland 68410.

Toronto, Ont.—The Canadian Paper Board Company has approved plans and will proceed with construction of a new one-story power plant on Commissioner street, for general mill service, reported to cost about $75,000, with equipment.

Salisbury, Conn.—Officials of Dard Hunters' Paper Mill, Chillicothe, Ohio, manufacturer of hand-made papers, have organized a new company under Connecticut laws, to be known as Dard Hunter, Inc., with capital of $50,000. The company will begin to operate immediately, taking over the former plant of the Barnum & Richardson Company, Lime Rock, near Salisbury, recently acquired by parent company. The plant will be remodeled and improved and equipped for branch mill for production of high-grade papers. Complete project will cost approximately $90,000. Dard Hunter, Chillicothe, and H. A. Beech, Kalamazoo, Mich., head the new Connecticut organization.

New Companies, Etc.

Fort Wayne, Ind.—The Consolidated Paper Company has been incorporated with capital of 1,000 shares of stock, no par value, to manufacture and deal in paper goods. The incorporators are Phillip Daneby, Fred C. Korte and B. J. Ankenbruck, all of Fort Wayne.

Kalamazoo, Mich.—The Western Paper Makers Chemical Company, Kalamazoo, a Delaware corporation, has filed notice of increase in capital from $5,000,000 to $8,000,000 for general expansion.

Windsor, Conn.—Stevens Paper Mills, Inc., has been incorporated under Delaware laws, with capital of $50,000, and 500 shares of stock, no par value, to take over and expand company of same name with mill at Windsor, specializing in the production of insulating board, press board, etc.

Houston, Tex.—The Continental Paper and Bag Corporation, 1 Pershing Square, New York, has filed notice of organization to operate in Texas, and has appointed J. E. Crain, Houston, as corporate representative.

Jamaica, L. I.—The Jamaica Paper and Twine Company, Inc., has been incorporated with capital of $20,000, to manufacture and deal in paper goods and proposes establishment of factory for production of paper bags, cartons, etc. The incorporators are Joseph Rubinowick and Benjamin Barkan, 2470 Crescent street, Astoria, L. I.

Behr-Manning Corp. Expands

GREEN ISLAND, N. Y., July 25, 1928.—The Behr-Manning Corporation has started work on an expansion program which will materially increase the capacity of the Watervliet plant within the next year. The Behr-Manning Corporation was formed recently through consolidations of the Behr Manufacturing Company, of Brooklyn, and the Manning Abrasive Company, of Watervliet, a subsidiary of the Manning Paper Company. Immediate erection of a large office building to cost $100,000 is planned. A building permit for this structure was secured this week and ground will be broken at once.

An addition to the warehouse adjoining the Watervliet factory will also be started at once. This addition will cost $25,000. Present plans of the corporation also call for the erection at Watervliet of new mill units within a year.

The office building will contain the main office of the corporation. Under the consolidation of the two firms the offices of the Behr Company and all manufacturing operations of the Brooklyn plant will be transferred to Watervliet. There will be an immediate increase in the number of office employees and a gradual increase in the number of workers employed in the mill. The company manufactures abrasive paper.

FOX RIVER VALLEY PROJECTS

(*Continued from page 23*)

to the annual conference of its salesmen, numbering about fifty in all. The entire group left aboard special railroad coaches Wednesday night for Ashland, Wis., and from there were to go to Wausau, Wis., and then return to Menasha. The purpose was to conduct a tour of each of the company's paper mills so the salesmen could gain first hand information as to the manufacture of the products they are selling. Marketing problems and sales plans and policies for the coming season were discussed after the tour was completed.

Traffic Safety Campaign

Paper manufacturers of Appleton, Wis., have extended their safety efforts beyond the confines of their mills by contributing the major support to a community campaign on traffic safety. They have assisted in financing a series of page advertisements in the local newspaper, and in the placing of safety warning signs all over the city. These signs remind drivers to protect children. Mills interested in the project are the Kimberly-Clark Company, Interlake Pulp and Paper Company, Appleton Coated Paper Company, Fox River Paper Company, Patten Paper Company, Thilmany Pulp and Paper Company, and the Wisconsin-Michigan Power Company.

Falatick to Serve on Safety Council

William Falatick, manager of the Thilmany Pulp and Paper Company's mill at Appleton, Wis., has been elected by the Appleton Chamber of Commerce as its representative on the Fox River Valley Safety Council. The council is undergoing permanent organization, with a representative from each city in the valley.

Lion Bag Co. Starts Plant at Cohoes

[FROM OUR REGULAR CORRESPONDENT]

COHOES, N. Y., July 30, 1928.—The Lion Bag and Paper Company is the name of the concern which recently leased for a term of years the building on Delaware avenue owned by Cushing Brothers. The plant has been equipped with special machinery for making paper bags and is now in operation. Additional employees are being added as production gradually increases.

The new firm is employing only a small number at the outset but it is planned to expand the plant as business warrants. Under the terms of the lease held by the Lion company the owners agree to make any additions to the structure which are deemed necessary in the future to care for the expansion of the business.

Several weeks ago when negotiations were under way for leasing the Delaware avenue plant it was announced by local city officials that the name of the new concern was the Adirondack Bag and Paper Company which proved incorrect.

The new plant is producing a full line of paper bags and as a result of alterations made at the plant and the installation of the latest approved bag making machinery the plant though small is said to be one of the most modern of its kind. Shipments will be made direct from the factory by way of the Delaware & Hudson Railroad. The plant has excellent transportation facilities, having a spur track of the D. & H. and being only a short distance from the Cohoes terminal of the Barge Canal which offers the firms its choice of making shipments either by rail or water.

Inland Paper Box Co. to Enlarge

INDIANAPOLIS, Ind., July 24, 1928.—The management of the Inland Box Corporation, Indianapolis, makers of printed paper boxes, has deemed it necessary to enlarge the plant at 700 West Morris street and a large material warehouse adjoining the main building now is under construction. The corporation, which is a comparatively new one, has made rapid strides toward success and has been supported by Indianapolis manufacturers whom it has served with regularity. The volume of business at the plant is reported to be increasing daily.

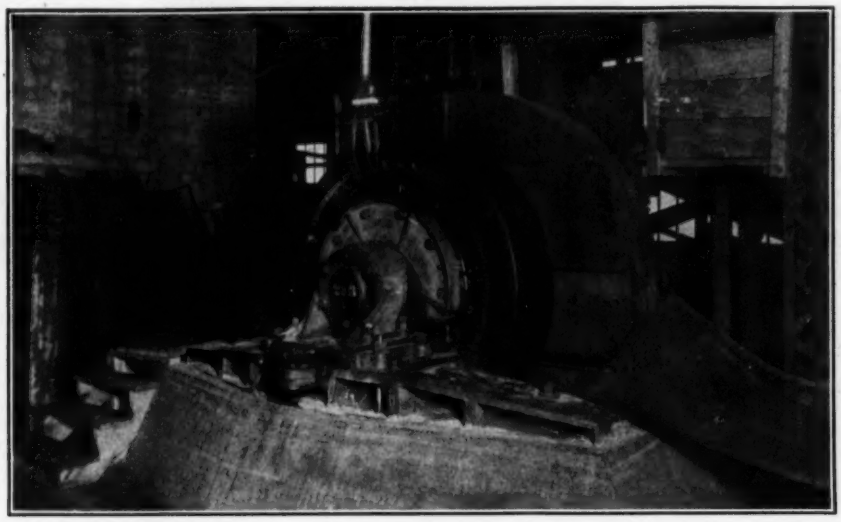
Nothing is apt to cost so much as a bearing that cost so little

You men who plan, build, use or pay for machines of any kind, remember this: It costs more to replace a poor bearing than to buy the best one that SKF ever produced. AND SKF ANTI-FRICTION BEARINGS ARE THE HIGHEST PRICED IN THE WORLD.

SKF Puts the Right Bearing in the Right Place

ONE OF THE 36 PAPER MACHINERY MANUFACTURERS THAT USES SKF BEARINGS AS REGULAR EQUIPMENT

D. J. MURRAY MFG. CO.



Heavy Loads at Terrific Speed Proves SKF are Lowest in Cost per Bearing Hour

MILE a minute peripheral speed! Just a steady whir for 16 hours each day as this direct-connected 96" wood chipper makes 800 cuts per minute 1" deep at a 45 degree across the grain of 19" diameter logs. And such unceasing operation produces enough wood chips to supply three paper machines on 24-hour production totalling 200,000 lbs. of paper per day.

Such consistent performance makes imperative the use of bearings giving the utmost reliability. SKF Ball and Roller Bearings on the 8½" main shaft insure this and the following additional advantages:—maximum production per HP input, uniform length of chip, less vibration, minimum slivers, less floor space, no belts, 30 to 50 percent power saving and 80 percent less lubrication. That is why SKF can truly be said to insure lowest cost per bearing hour.

SKF INDUSTRIES, INCORPORATED
40 East 34th Street, New York, N. Y.

2087

SKF

THE HIGHEST PRICED BEARINGS IN THE WORLD

Obituary

James Martin Ramage

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., July 31, 1928.—Holyoke has lost another of her old line paper manufacturers in the death of James Martin Ramage, aged 59, who passed away in his Northampton street home Friday morning. It was through his efforts that the Franklin Paper Company grew to success and his loss to the community will be felt, not only by his business associates, but in the host of friends he made in his social affiliations. He was a member of the old Sans Souci Club, a charter member of the Mt. Tom golf club, a member of the Bay State club and the William Whiting lodge of Masons in which he was very active. For many years he was treasurer of the Unitarian church as well.

He was born in Holyoke, February 13, 1869, the son of James and Adelaide Ramage, and was graduated from the Holyoke high school in 1887. After post graduate work in Eastman's Business College at Poughkeepsie, N. Y., he started his career of paper manufacturing at Monroe Bridge, Mass.

In 1897 he became treasurer of the newly formed Franklin Paper Company. After five years with the James Ramage Paper Company at Monroe Bridge, he returned to the Franklin Paper Company. He continued as president and guiding force of the latter company until ill health, with which he contended for many years, necessitated his withdrawal a year ago.

In 1899 he married Marguerite B. Dorr, daughter of Charles W. and Octavia E. Dorr of Woburn, Mass. She survives him as well as two daughters, Doris and Mary, and two brothers, Robert of Holyoke and Theodore of Springfield, Mass., and three sisters, Mrs. Archibald Ramage of Northampton, Mass., Mrs. George Watson of Holyoke, and Mrs. Edson Lyman of Sheldon Springs, Vt. The funeral was held at the home Monday afternoon and was private. Rev. Dr. R. R. Wicks officiated. Burial was in Forestdale cemetery.

Fred L. Atkinson

[FROM OUR REGULAR CORRESPONDENT]

WOODLAND, Me., July 30, 1928.—Fred L. Atkinson, prominent for many years as one of the executives of the St. Croix Paper Company, died at the Calais hospital on July 16, in his 72nd year.

Mr. Atkinson was a son of the late Ex-Mayor Benjamin F. Atkinson and was born in Charleston, Maine, November 12, 1856. He went to Newburyport, Mass., with his parents when eight years of age and resided there during his lifetime. After graduating from the local Newburyport high school, he was for four years a clerk in the office of the Merrimac Coal and Wood Company. Then he entered the office of the late Hon. Charles C. Dame, then collector of internal revenue.

His father was a prominent ship builder and Mr. Atkinson in 1881 became associated with him under the firm name of B. F. Atkinson & Son.

As shipbuilding waned, Mr. Atkinson turned his attention to other channels of industry and with Capt. H. M. Cross as partner established a coal business. Later he organized the Atkinson Coal Company, of which for many years he was at the head. This company built up a large retail and wholesale business and served Newburyport as well as other communities. Mr. Atkinson was largely interested in other projects, which included paper manufacturing. He served for several years on the Board of Directors of the St. Croix Paper Company, located at Woodland, Maine, as well as being president of the Woodland Company, a subsidiary of the St. Croix Paper Company. He was one of the men who largely contributed to the reorganization of the Towle Manufacturing Company, Newburyport, of which he served as president. He was also connected with other enterprises in which his unusual business ability was manifested.

Mr. Atkinson was for several years one of the directors of the old First National Bank of Newburyport. He was an ardent Republican and a valued counsellor in party policies. He served as postmaster at Newburyport for many years.

Owing to failing health, Mr. Atkinson has been gradually withdrawing from business interests. Several years ago he disposed of his coal business to his nephew, W. E. Atkinson, and other enterprises were relinquished from time to time.

Mr. Atkinson is survived by his wife, who was Susan B. Russell, daughter of the late Mr. and Mrs. Albert Russell, and several nephews and nieces. Funeral services were held at the Unitarian Church and interment was made in the Newburyport cemetery.

Charles I. Karasik

Charles I. Karasik, former secretary and manager of the Ravenswood Paper Mill Company, of Long Island City, died Thursday morning of the last week at his home, 900 West End Avenue, after a lingering illness. He was forty-five years old and had relinquished his connection with the paper milling company two years ago and since then was inactive.

He was a member of the Jewish Theatrical Guild, Thursday Nighters, National Democratic Club, the Grand Boys and New York Lodge No. 1 of Elks.

His mother, Mrs. Fannie Karasik; two brothers, Joseph and Louis Karasik, and two sisters, Mrs. Sadie Breakstone and Rose Karasik, survive. Funeral services will be held at 1:30 p. m. today at Riverside Memorial Chapel, Seventy-sixth street and Amsterdam Avenue. Burial will be in Mount Carmel Cemetery.

George J. Focke

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, July 30, 1928.—George J. Focke, 49 years old, widely-known business man and director of the Miami Valley Coated Paper Company at Franklin, died at his home, 1180 Harmon avenue, Oakwood, suddenly last week after an illness extending over several months. Mr. Focke apparently was improving and a short time before he was stricken, was in the garden on his spacious residence grounds. The members of his family had left to attend an affair given for the benefit of charity, believing he was in better health than he had been for many weeks.

Mr. Focke joined the organizers of the Miami Valley Coated Paper Company several years ago and had at all times been keenly interested in the progress of the concern. He was interested financially in Terminal Cold Storage Company, the Focke Realty Company; was treasurer of the Union Stock Yards Company, secretary of the Greene, Embry & Peterson Company, and the head of the Focke Packing Company. He was affiliated with many fraternities and the St. Joseph Orphans' Home. He is survived by his widow and one son, William, and five brothers.

William H. Clark

[FROM OUR REGULAR CORRESPONDENT]

William H. Clark, Eastern sales manager for the Howard, Aetna and Maxwell Paper Companies, died suddenly at his home Saturday, July 28. Mr. Clark was about 71 years old and had been with the Howard, Aetna and Maxwell Paper Companies for the past 27 years.

President Willson Returns to Holyoke

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., July 10, 1928.—Sidney L. Willson, president of the American Writing Paper Company, and Leon M. Yoerg, vice-president and general superintendent of the company, reached this city last Wednesday after a several weeks trip to Europe during which both attended a papermaking convention in Germany and visited the papermaking centers of Europe.

IMPORTANT

POSTAL TELEGRAPH - COMMERCIAL CABLES

CLARENCE H. MACKAY, PRESIDENT

CLASS OF SERVICE DESIRED

FAST TELEGRAM	
DAY LETTER	
NIGHT TELEGRAM	
NIGHT LETTER	

TELEGRAM

TELEGRAMS TO ALL AMERICA

CABLEGRAMS TO ALL THE WORLD

RECEIVER'S NUMBER

CHECK

TIME FILED

STANDARD TIME

Send the following Telegram, subject to the terms on back hereof, which are hereby agreed to.

Form 2 Dbk

JULY 2 1928

TO THE PAPER TRADE

THIS IS TO ADVISE YOU THAT THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT HERE IN NEW YORK RENDERED A UNANIMOUS OPINION ON JULY SECOND REVERSING THE LOWER COURT AND HOLDING OUR PATENT 1310698 VALID AND INFRINGED BY THE IDEAL CUP THIS IS TO SERVE AS A NOTICE THAT ANY ONE WHO HAS SOLD OR IS SELLING IDEAL DRINKING OR SOUFFLE CUPS OR ANY DRINKING OR SOUFFLE CUP OF SIMILAR CONSTRUCTION OTHER THAN THE TULIP CUP WILL BE HELD RESPONSIBLE BY US AND CALLED UPON FOR AN ACCOUNTING AND PAYMENT OF DAMAGES

TULIP CUP CORPORATION

The World's Finest Paper Cup

TULIP CUP CORPORATION

COLLEGE POINT NEW YORK

Pacific Coast Agents:
THE SANITARY PRODUCTS CORP.
San Francisco, Calif.

New York Trade Jottings

The International Combustion Enginering Corporation has sold its 51 year leasehold property at 43-47 Broad street, to the Tribune Realty Corporation.

* * *

The annual convention of the Wall Paper Manufacturers' Association of the United States opened on Monday at the Hotel Commodore and will close after the final session tomorrow, Friday.

* * *

Frank P. Lowden, until recently manager of manufacturing for the International Paper Company, is to undertake other duties for the organization.

* * *

The Board of Directors of the International Paper Company have declared a dividend of 60 cents a share on the common stock of the company, payable August 15, to common stockholders of record at the close of business, August 1.

* * *

A. H. Campbell, general traffic manager of the International Paper Company, has been appointed general traffic manager of the Continental Paper and Bag Mills Corporation, and subsidiaries, in charge of all transportation matters.

* * *

The United States Hoffman Machinery Corporation and subsidiaries report net income of $252,115 for the June quarter, equivalent to $1.13 a share earned on 222,203 no par shares, compared with $225,427, or $1.01 a share, in the preceding quarter and $346,269, or $1.56 a share, in the second 1927 quarter. Net profit for the first half of 1928 totaled $477,543, equal to $2.14 a share, against $617,967, or $2.78 a share, in the first half of 1927.

* * *

The Hercules Powder Company for six months ended June 30, 1928, reports net profit of $1,789,649 after depreciation and federal taxes, equivalent after dividend requirements on 7 per cent preferred stock, to $9.45 a share earned on 147,000 shares of common stock. This compares with $1,507,412 or $7.54 a share in first half of 1927. Net profit for quarter ended June 30, was $992,611 after above charges, equal to $5.39 a share on common against $797,038 or $4.06 a share on common in preceding quarter and $806,601 or $4.12 a share in second quarter of previous year.

* * *

The Export and Import Bureau of the Baltimore Association of Commerce announces the appointment of a New York representative who will work here in the interest of the Port of Baltimore. A. J. Morris has been appointed to the position and will make his offices at 8 Broadway. The move was made necessary by increased port competition and by the large amount of shipping business which is controlled in New York. The Port of Hampton Roads also recently established an office of its own here, and New Orleans is considering taking a like step. Charleston, S. C., maintains an office here, and other Atlantic and Gulf ports are studying such a move.

* * *

Members of the pulp and paper industry will be interested in the announcement by the Swedish American Line that plans are being perfected and contract soon will be awarded for the construction of still another new passenger motorship, to be built along the lines of the motorship *Gripsholm* and the new *Kungsholm*. The new ship will be of about the same dimensions as the *Kungsholm*, i.e., length 608 feet, beam 78 feet, 19,000 tons register and 26,700 displacement tons, and will be powered by two four-cycle eight-cylinder Diesel motors developing over 20,000 horsepower at 18 knots. The *Gripsholm* was the pioneer in the field of motorships for transatlantic passenger service, and because of her successful performance the line decided to install this type of motive power also on the *Kungsholm* and on the new ship soon to be built.

Taking Up Stream Improvement Program

On March 26, 1928, C. M. Baker, Engineer of the American Paper and Pulp Association, at a conference of paper mill representatives of Connecticut with state officials and the Connecticut Manufacturers Association, recommended that a committee representative of this industry be appointed by the Manufacturers' Association to cooperate with state officials and the American Paper and Pulp Association in Waste Utilization and Stream Improvement. It was also suggested that similar committees representative of all branches of industry which are factors in stream pollution be appointed. The committee of the paper industry consists of H. E. Hasty, Chairman, Robert Gair Company; H. T. Brown, Inland Paperboard Company; A. D. Coffin, C. H. Dexter & Sons; C. C. Case, Case Board Company; and John P. Kennedy, American Writing Paper Company.

Since the initial meeting and organization of the paper industry similar meetings have been held and organizations developed in the hat industry on June 5; rubber, June 12; laundry, June 26; steel, July 11; bakeries, July 13; and the silk industry, on July 18. The committee of the paper industry held its second meeting on June 20. At all of these meetings state officials have indicated a considerate, rational attitude toward industry, and industry on the other hand has shown an excellent spirit of cooperation. Harmony prevails, and all feel that by this constructive program definite and practical results will be secured.

The manufacturers' associations of other states are also taking an interest in stream improvement, and in some cases have already appointed committees to actively take up the problem. National organizations of other industries are making inquiries and considering aggressive action.

This awakening interest of industry as a whole in the problem of stream pollution is very encouraging. All industries having liquid wastes to dispose of contribute more or less to stream pollution. Improvements by any, therefore, benefit all either directly or indirectly. As improvements are made by one industry or another complaints will become less numerous, and the attitude of the public correspondingly more lenient. Furthermore, the activities of others tend to consolidate industry as a whole, not only in a study of the problem, but also in its presentation in matters of legislation and policy before state or federal officials and others interested. The outlook is most encouraging.

G. W. Dyne Joins American-British Supplies

G. W. Dyne, who for the past fourteen years has been manager of the casein department of T. M. Duche & Son, New York, has recently become associated with the American-British Chemical Supplies, Inc., of New York, where he will continue to specialize in the domestic and imported casein fields.

In his new connection Mr. Dyne has acquired the sole selling agency for the Smith, Kline and French Company of Philadelphia, and the California Milk Products Company, of Gustine, California, producers of California K. M. casein, as well as taking on a standard Argentine casein.

The American-British Chemical Supplies, Inc., is affiliated with the Barter Trading Corporation of London, and Charles Tenant & Co., Ltd., of Glasgow, the latter having been established in 1792.

Japanese Paper Exports Increase

WASHINGTON, D. C., August 1, 1928.—Increase in Japanese paper exports in shown in a report received by the Department of Commerce during the first quarter of 1928, which were valued at $3,504,215, exceeding similar shipments during the corresponding quarter in 1927 by 8 per cent and in 1926 by 20 per cent. Over one-third of these exports were represented by printing paper shipments, which show a rise from 7,380 short tons in 1926 to 6,251 tons last year and 11,490 tons during the current year. Imports of this class of paper during the same period have held fairly steady at 4,600 tons to 4,800 tons.

MAKE UNIFORM SIZE FROM UNIFORM ROSIN

NEWPORT and ACME WOOD ROSINS are uniform in chemical composition, uniform in color, uniform in cleanliness, uniform in sizing value and when packed in steel drums are economically uniform products in economically uniform packages, therefore make uniform size from NEWPORT and ACME uniform wood rosins. U. S. Std. FF. Grade.

Sold the World Over by

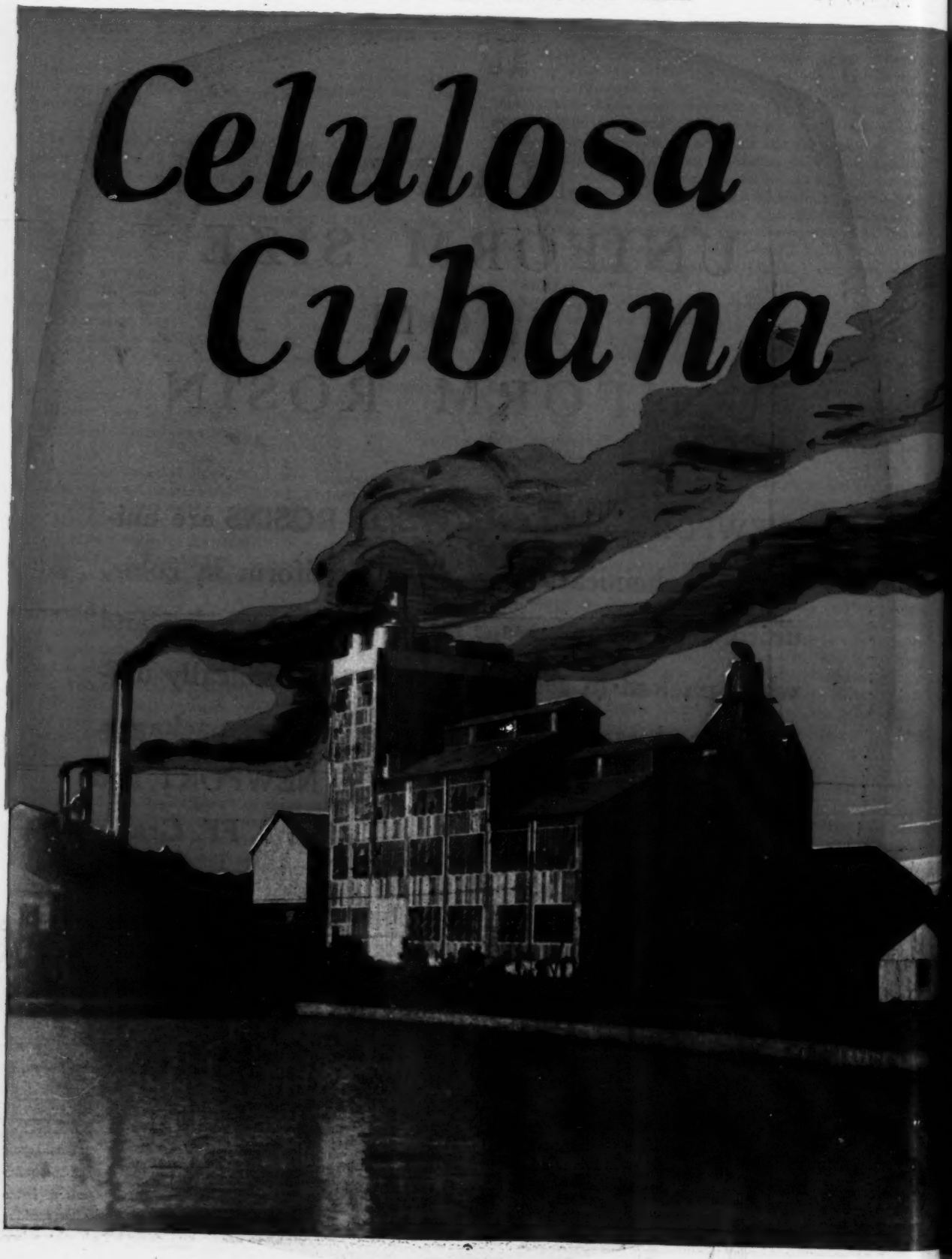
GENERAL NAVAL STORES COMPANY

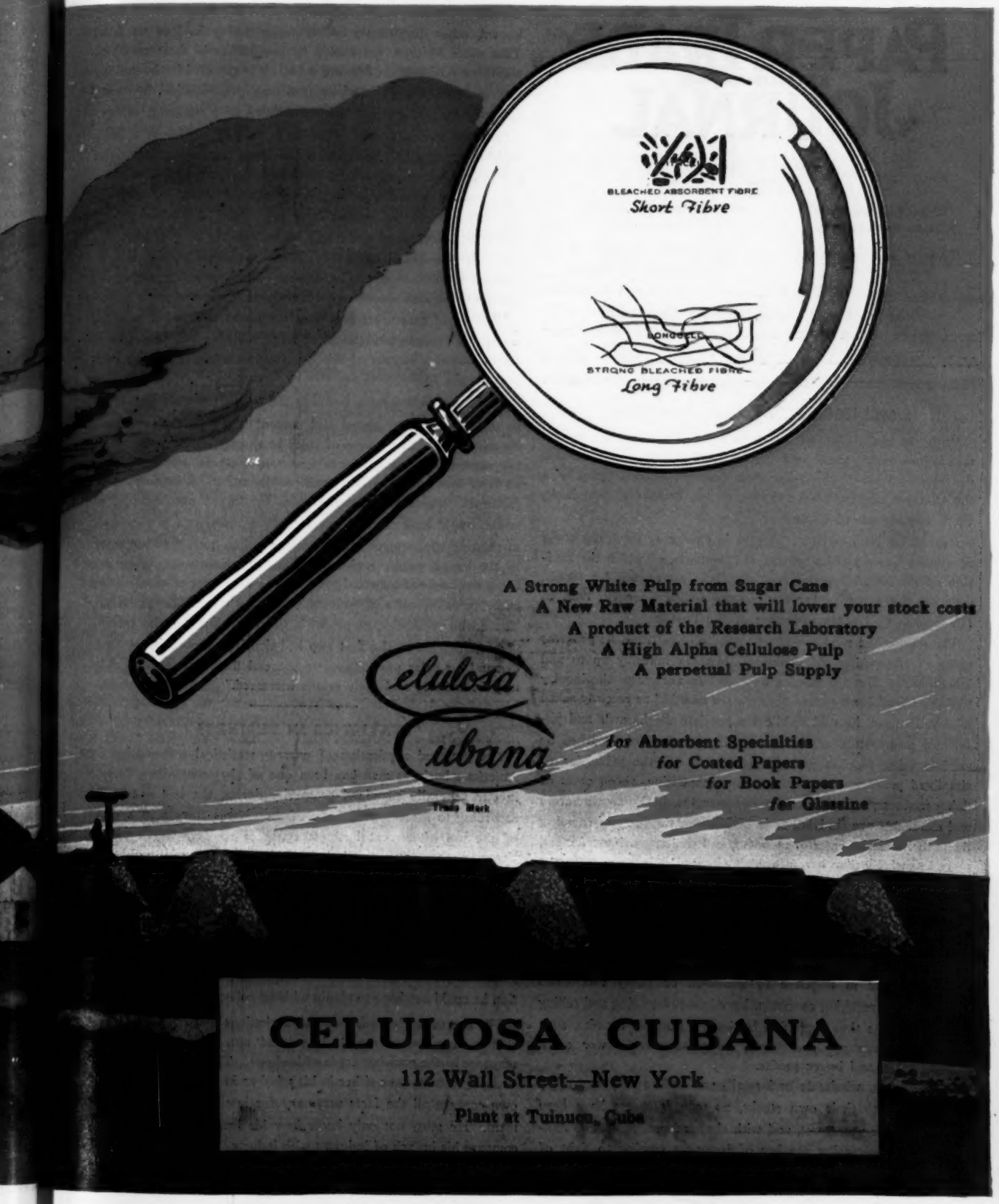
Incorporated

New York, Cincinnati, Chicago, New Orleans, Philadelphia, Minneapolis

The oldest and largest organization in the world exclusively engaged in selling "Steam Distilled Wood Turpentines," Pine Oil and Wood Rosin.

Address any company office when needing rosin research aid Laboratories at Cincinnati, O., Pensacola, Fla., De Quincy, La.


Celulosa
Cubana


BLEACHED ABSORBENT FIBRE
Short Fibre
STRONG BLEACHED FIBRE
Long Fibre
A Strong White Pulp from Sugar Cane
A New Raw Material that will lower your stock costs
A product of the Research Laboratory
A High Alpha Cellulose Pulp
A perpetual Pulp Supply
for Absorbent Specialties
for Coated Papers
for Book Papers
for Glassine
Celulosa Cubana
Trade Mark
CELULOSA CUBANA
112 Wall Street—New York
Plant at Tuinucu, Cuba

PAPER TRADE JOURNAL
ESTABLISHED 1872

Henry J. Berger
Editor

Ronald G. Macdonald
Editor Technical Section

Herbert J. Laughton
Assistant Editor

Thomas J. Burke, C. A.
Editor Cost Section

Reginald Trautschold, M. E.
Power Engineering Consultant

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXVII New York, Aug. 2, 1928 No. 5

SIMPLIFICATION MAKES PROGRESS

With the completion of seven new simplified practice recommendations during the second quarter of 1928, industries have now developed a total of ninety-five simplifications in cooperation with the Division of Simplified Practice, of the Bureau of Standards, U. S. Department of Commerce.

Ray M. Hudson, assistant director in charge of the Commercial Standards Group of the Bureau of Standards, of which the Division of Simplified Practice is a part, has just rendered a report, covering the activities for the quarter ending June 30, 1928, to Dr. George K. Burgess, Director of the Bureau.

The report just rendered by Mr. Hudson describes the progress made in eliminating the avoidable waste in industry up to and including the first six months of 1928. In answer to the inquiry "What's ahead for business the next six months" as recently asked of Mr. Hudson, he said "while I appreciate the hazards and pitfalls of prognostication, I believe this period will be marked by an increasing interest in, and application of, the principles of simplified practice. Because of keen competition, rising costs of doing business, and shrinking profit margins, both manufacturers and merchants are studying their inventories, the costs of carrying them, their relative rates of turnover, and similar pertinent factors, more intensively than heretofore.

"A growing recognition is evident among manufacturers that a fertile source of hidden profits is in the elimination of excessive variety in the goods offered the public. Lines, items, sizes, types, styles, or models, even brands for which there is little, if any, demand, are being dropped in favor of items, etc., that enjoy a better turnover in response to sustained or fairly continuous demand. The resulting concentration of manufacturing and selling effort on stocks thus simplified is yielding tangible benefits, such as smaller inventory investments, better turnover, lower costs, better service, and better profits.

"Distributors, wholesale and retail, are finding they can apply simplification to their own stocks, as manufacturers have been doing for some years past, and with similar benefit. This is indicated in the increasing number of instances coming to light of jobbers and merchants who have applied simplification successfully and profitably. As the experience of those who have benefited from this form of waste-elimination effort becomes more generally known, other distributors are evidently taking hold of the idea. That more of them are testing its application in their establishments, or seriously considering doing so, is reflected in the steadily increasing number of inquiries regarding simplification, inventory control, etc., coming into the Department of Commerce.

"Interest among consumer groups is also developing at a fairly rapid rate. As might be expected, industrial purchasing agents and stores department supervisors have been quick to realize on their opportunities afforded them through simplification, to more effectively control the expenditures for which they are held responsible. Several of the larger manufacturing corporations, and the railroads especially, have already made substantial savings through simplification. Its application is now spreading among the smaller firms, also among city, county, and state purchasing agents.

"Individual consumers are becoming better acquainted with the wastes of 'overdiversification' and the invisible tax they pay in their purchases because of this overdiversification. Inquiries from them to the Department are also increasing.

"A further indication is found in the reaction already developing in some quarters to recent and current trends toward excessive diversification. The advent of color into many hitherto plain lines, has caused jobbers of these articles to protest the effect produced on their inventories by this stock multiplication. Likewise, manufacturers' efforts to stimulate sales by forced obsolescence, or unduly rapid style changes, are subjecting merchants to the strain of clearing stocks more rapidly, perhaps, than normal consumption by the buying public would warrant. In consequence, prices are being cut, and the expected profits from the larger sales are being absorbed in the costs of these extraordinary merchandising efforts. Those who are finding no profits in this procedure are also turning to simplification as the first step in balancing stocks with probable demand, or sales possibilities, to the end that their present risks may be reduced and their profits increased."

STATISTICS IN BUSINESS

The practical application of current statistical information by American business men has been one of the outstanding factors in our generally sustained prosperity during the last five years, according to Mortimer B. Lane of the Census Bureau in a study of the use of current business statistics recently issued by the Commerce Department. Periods of similar commercial and industrial activity, it is pointed out, have as a rule been characterized by more or less violent fluctuations. Nearly 300 specific instances of the use of statistics in business have been collected by Mr. Lane, who presents suggestions as to how these figures may be used to the best advantage. The small business man, he states, has been particularly benefited through the use of current statistics, information he could not hope to obtain without collective action.

The rise of statistics from small beginnings to a position of such commanding importance, it is pointed out, has been a definite response to the growing needs of business. The business executive of today cannot have either in his mind or in the possession of his own concern all the facts necessary for intelligent business judgment. He must not only know how his firm is doing, but must compare his branch of industry with industry as a whole and must know the buying conditions of his customers, as well as the condition of his material markets. These data he cannot get within his

own organization, for they can be gathered only by agencies representing or collecting figures for an entire industry.

The result of this need of the business world has been the growth of statistical services by Government departments, trade associations, periodicals and individual business concerns. The data thus collected are brought together by the Bureau of the Census and presented weekly and monthly in the Commerce Department's publication, Survey of Current Business. Through the medium of this survey the public now has the benefit of no less than 1,700 separate indicators of business trends.

Almost all important business organizations now make use of statistical information for the guidance of their respective activities, including such important industries as the textile, machinery, oil, leather, automobile, chemical, lumber, food products, advertising and insurance. The meaning of the various statistical terms is explained, with examples of their interpretation, taken from the the experience of business firms.

To Sell Property in Glen Park District

[FROM OUR REGULAR CORRESPONDENT]

GLEN PARK, N. Y., July 30, 1928.—Reports current for several weeks that the real estate of the International Paper Company in the Glen Park district was to be put on the market were confirmed this week when it was announced that Robert J. Dundon, of Watertown, had made arrangements with the I. P. Co. whereby he becomes exclusive selling agent for all real estate of the paper concern not only in Glen Park but Watertown as well. Water power rights are to be retained by the I. P. Co.

The paper concern owns about twenty-five tenement houses in Watertown and Glen Park and considerable vacant land. Two groups of houses are on the north side of Black River, one at No. 4 mill and a second group in the village of Glen Park near the mill originally owned and operated by C. R. Remington & Son at Woods Falls. The No. 4 mill was originally owned and operated by the A. D. Remington Paper Company. Both properties were acquired by the International Paper Company many years ago.

Announcement that the real estate would be sold is the first definite move by the International Paper Company since it was first reported several years ago that the company was to convert the Black River mill sites for power development. The C. R. Remington mill was practically destroyed by fire two years ago and the No. 4 mill was burned last fall. No move was made to rebuild either plant.

In explaining the abandonment of the Glen Park mills it is said that pulp grinding and paper manufacturing cannot be profitably carried on here owing to the necessity of bringing pulpwood from Canada instead of floating the logs down the Black River to the mills as in the days when the Remington interests owned and operated both plants.

The water power rights at Glen Park are considered exceedingly valuable and it is generally understood that the International Paper Company has mapped elaborate plans for developing the power at this point. It has been reported that several million dollars will be expended on power development.

Big Pulp Shipment Arrives at Hudson Falls

FORT EDWARD, N. Y., July 30, 1928.—One of the largest shipments of pulp to reach the local barge canal terminals this season was received last week when four large barges arrived for the Union Bag and Paper Company, Hudson Falls. The work of unloading the pulp is now under way and a fleet of motor trucks are transporting the pulp to the Union Bag plants in Hudson Falls. Since the closing of the sulphite mill the Union Bag and Paper corporation is getting practically all of its pulp requirements by way of the Champlain Barge Canal.

American Writing Has Good Half Year

HOLYOKE, Mass., July 30, 1928.—Sidney L. Willson, president of the American Writing Paper Company, Inc., announced last week that the profits of the company for the first six months of the year 1928 totaled $197,810.23.

Commenting on this, Mr. Willson made the following statement:

"The American Writing Paper Company, Inc., statement as of June 30, 1928, is an indication of the progress being made by the company. The net earnings above the interest on the first mortgage bonds and serial notes for the first six months exceeded by 30 per cent the total earnings for the entire year of 1927. They were 300 per cent over the net earnings for the first six months of that year. This improvement is the result of economies in operation rather than increased sales. The total sales for the six months period was $814,910.14 less than for the corresponding six months of 1927.

"The slogan—'Better Business rather than Bigger Business'—has been practically applied by the elimination of the less profitable lines and by the greater sales efforts made on those grades which show reasonable profits for the company."

The balance sheet of the company follows:

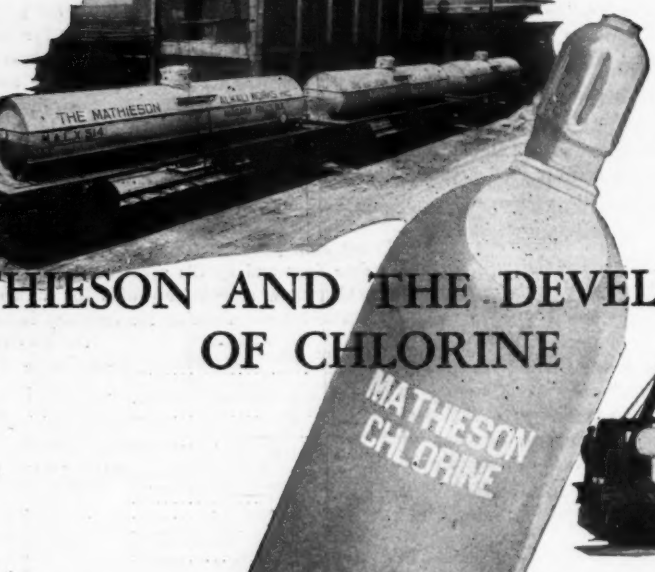
ASSETS	June 30, 1928		June 30, 1927	
Current Assets				
Cash	$ 1,415,707.10	8.62	$ 1,070,666.84	6.49
Notes and Acceptances (Net)	82,726.92	.50	50,453.46	.31
Accounts Receivable (Net)	1,355,503.51	8.25	1,362,773.99	8.26
Inventories	2,477,321.17	15.07	2,796,713.87	16.96
Total Current	$ 5,331,258.70	32.44	$ 5,280,608.16	32.02
Plants and Equipment (Net of Depreciation)	$10,626,259.47	64.67	$10,546,106.42	63.94
Choral Properties, Inc.	407,598.22	2.48	550,000.00	3.33
Investments	2.00	....	2.00	....
Prepaid Expenses	55,593.72	.34	61,161.27	.37
Deferred Taxes	2,471.85	.01	2,439.06	.01
Other Deferred Assets	9,145.55	.06	52,455.71	.33
Trade Marks, etc.	1.00	....	1.00	....
Total Capital	$16,432,330.51	100.00	$16,492,773.62	100.00
LIABILITIES				
Current Liabilities				
Accounts Payable	$ 488,694.90	2.97	$ 526,022.23	3.19
Accrued Accounts	126,557.82	.77	99,650.38	.60
Reserve for Federal Taxes	17,613.29	.11	0	....
Total Current	$ 632,866.01	3.85	$ 625,672.61	3.79
First Mortgage Bonds	$ 5,500,000.00	33.47	$ 5,500,000.00	33.35
Less: In Treasury	—34,000.00	—.21	0	0
Serial Notes	850,000.00	5.17	1,000,000.00	6.06
Less: In Treasury	—109,500.00	—.67	0	0
Total Fixed	$ 6,206,500.00	37.77	$ 6,500,000.00	39.41
Net Worth				
Preferred Stock	$ 9,000,000.00	54.77	$ 9,000,000.00	54.57
Less: In Treasury	—73,200.00	—.44	0	0
Common Stock, 155,000 shares				
Less: In Treasury, 2380.1 shares				
Surplus	318,522.13	1.94	318,522.33	1.93
Profit—1927	149,831.94	.91		
Profit—Current	197,810.23	1.20	48,578.68	.30
Total Net Worth	$ 9,592,964.50	58.38	$ 9,367,101.01	56.80
Total	$16,432,330.51	100.00	$16,492,773.62	100.00

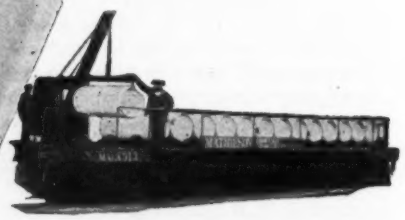
Twice Capacity of Any Other Paper Company

With the recent acquisition of the Moss Point, Mississippi, kraft paper mill, the mills of International Paper Company and subsidiaries now have a capacity when running full of upwards of 4,500 tons a day, or approximately 1,400,000 tons a year, of paper and of pulp available for sale. The recent rapid growth of the company is well illustrated by the fact that as recently as 1924 its total sales of paper and pulp aggregated 434,000 tons.

The present pulp and paper capacity of the company it is said is more than twice that of any other company in the world. The paper capacity of the company now includes a great variety of grades—news print, rotogravure and other ground wood grades, bag paper, kraft and other wrapping papers, sulphite bond and high-grade book papers, paper for grocery bags, cement sacks and many other purposes, including tissue paper and toweling. The pulp capacity of the company includes soda pulp, kraft pulp, and a large quantity of bleached sulphite pulp sold to manufacturers of rayon and bond papers.

MATHIESON AND THE DEVELOPMENT OF CHLORINE





MATHIESON
Industrial
Chemicals

CAUSTIC SODA
LIQUID CHLORINE
BICARBONATE OF SODA
MODIFIED VIRGINIA SODA
SODA ASH
BLEACHING POWDER
ANHYDROUS AMMONIA
AQUA AMMONIA

FOR over a hundred years after English scientists had demonstrated its remarkable oxidizing and bleaching qualities, Chlorine was available to industry only in the form of Bleaching Powder — an uneconomical and a comparatively unstable compound with lime. Up until 1895, moreover, all bleaching powder consumed in the United States had to be imported. It was in that year that Mathieson completed the first unit in America for the production of electrolytic Chlorine. The Mathieson plant was the first in this country to manufacture bleaching powder.

Almost a score of years passed before improved liquefaction processes made possible the economical production of liquefied Chlorine gas in industrial quantities. Gradually Liquid Chlorine in steel cylinders began to displace bleaching powder. Mathieson was one of the pioneers in this development and fostered the transition from bleaching powder to Liquid Chlorine through the design of safe and efficient means of Chlorine transportation. When tank car shipments were required to serve larger consumers, Mathieson again was a pioneer with the specially constructed Multiple-Unit Tank Car.

Today, Liquid Chlorine has developed into an industrial commodity which is used by the thousands of tons every year and which represents a capital investment of millions of dollars in plant and container equipment. And Mathieson, as the largest shipper of Liquid Chlorine in the world, offers the utmost in equipment—from single-unit and multiple-unit tank cars to 100 and 150 lb. cylinders—for adequately serving every class of Chlorine consumer.

The MATHIESON ALKALI WORKS (Inc.)

250 PARK AVENUE — NEW YORK CITY

PHILADELPHIA . CHICAGO . CLEVELAND . CHARLOTTE . CINCINNATI

DEAL DIRECT WITH THE MANUFACTURER

WORKS: NIAGARA FALLS, N.Y. SALTVILLE, VA. • NEWARK, N.J.

Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Chemical Wood Pulp Quality Evaluation*

By J. L. A. Macdonald[1] and G. A. Cramond[1]

The evaluation of the quality of chemical wood pulps is of such importance to the paper trade that it is somewhat remarkable the subject has received so little attention from the industry. It is true that the trade has adopted long since a method for the estimation of moisture in wood pulps, and a considerable amount of literature has been published regarding the estimation of the bleaching quality of certain grades of chemical pulps, but in this latter case, no attempt has been made to develop or adopt a standardized method of procedure.

The present communication is a note dealing with the problem of the testing of chemical wood pulps for strength, a term which in papermaking contains a wider meaning than the mere word would normally convey.

Strength in its usual sense implies a capacity to resist the application of a force, but when a papermaker talks of the strength of a pulp he associates with the word, in his own mind, something more than this; he can not help remembering that the heart of the mill is the beater, and he goes on to think, consciously or otherwise, of the awful blasting and bludgeoning which the fibers of his pulps must receive as they pass through this terrific man-made engine; in other words, to the papermaker the "strength quality" of a pulp is very closely associated with its behavior during the beating process.

The ultimate strength of the finished sheet of paper may or may not be of importance but true it is, nevertheless, that the elusive quality of paper which we call "handle" is intimately associated with the beating process; and is, in part, connected with that quality of the constituent pulps which we commonly describe by the useful word "strength."

It should be needless today to propound an argument favorable to the desirability of testing chemical wood pulps for strength, but however that may be, there does seem some necessity for urging the trade to a more active interest in the development of methods for the accurate evaluation of this property; or, more briefly, there exists a crying need for the issue by the trade of a standard method of testing pulps for strength. At first sight it may seem a very simple problem to test wood pulps for strength, but we think that a perusal of two highly important papers on this subject by R. W. Sindall and by Baker and Jennison respectively, read before the Technical Section of the Papermakers' Association in 1923 (Proceedings Technical Section, P. M. A., Part 1, Vol. IV, 1923, and ditto, Part II, vol. IV, 1924) will serve to make it clear that the problem presents certain difficulties.

Wood pulp as received by the British papermaker is commonly in the form of a dry lap or sheet and the obvious and usually employed method of testing is to tear a sheet with the fingers and so estimate the force required. Such a method breaks down for several reasons; in the first place it is not possible to interpret the resistance to tearing in terms which can be put down on paper, and secondly there is more than a little doubt as to whether the "tear" of a sheet of pulp is truly indicative of the strength characteristic of the pulp when converted into a sheet of paper. After all, when we come to think of it, those of you who have seen the process of chemical wood pulp manufacture will at once appreciate that the pulp is delivered to the wire of the pulp machine in such a congested condition that it is quite impossible to imagine that a spread or interlacing of fibers can occur sufficiently uniform to admit of the production of a really level web of pulp. Sindall, in his paper, makes it clear that any attempt to evaluate for strength wood pulp as it is received is a vain and useless procedure.

Numerical Data

In order to obtain numerical data which can be recorded on paper, Sindall applies the well-known "bursting" test (Mullen) to the pulp sheet as received, and finds such irregularity that he is forced to discard the test as a useful measure of quality. Ascribing the reason of this failure to obtain concordant results to the uneven felting of the fibers, he proceeds to make sheets of his own by hand-mould after a preliminary disintegration in a model beater. The results are now more satisfactory, but he finds clear evidence of the existence of several other factors which influence the behavior of the hand-made sheet, results which have been amply confirmed by other investigators (R. S. Hatch, "Determining the Strength of Pulps, Report of Committee on Standard Methods of Testing, TAPPI—U. S. A., and E. P. Cameron, "The Effect of Pressure on the Strength of Test Sheets," *Pulp and Paper Magazine of Canada*, February, 1923).

A point emphasized by Sindall is that the pressure employed in the making of the pulp sheet has an outstanding effect on the test result finally obtained. An important sentence in Sindall's paper may here be quoted. He says "It is evident that the order of merit (strength) of the pulps is only determined properly by converting the pulps into sheets of paper under exactly comparable conditions."

In Sindall's view, therefore, the issue is clear, and we are in full agreement with him. It is absolutely necessary to convert the

*Presented before South of Scotland Division of Papermakers' Association of Great Britain and Ireland.
[1]Markinsch, Fife, Scotland.

pulp under test into sheets not only under exactly comparable conditions, but it is no less necessary to make the test sheets under conditions which are clearly and sharply defined.

The only practical method of testing pulps for strength is in the form of sheets—none will dispute this suggestion—and Baker and Jennison carry the argument a stage further (loc. cit.) when they describe the sheet-making device commonly known as the "Wilen" machine. These authors give a full description of the machine in its original for a clear and accurate diagram is part of their contribution. This machine in its essentials is now accepted as the prototype of laboratory sheet-making instruments, and a short description of a modified form is given later in this communication.

We should now like to pass back to our original problem, the measurement of pulp strength and all that this implies. To obtain a measurement of "pulp-strength-quality" we require to make the pulp into a uniform sheet, and further in addition to obtaining this measurement, we also require to ascertain the behavior of the pulp, in regard to strength characteristic, during the beating process. As has already been indicated, it is not sufficient for the paper-maker to know how strong his pulp is as he receives it; he requires also to know how the pulp is going to behave when he submits it to his beating process—that is, to what extent is it going to lose or gain in strength.

For the moment let us assume that, if we can make a sheet from a sample of pulp in any stage of its history, we are able to measure its strength. With this assumption let us analyze what our requirements may be with regard to the preparation of the test sheet.

If we regard the problem from the point of view of the individual pulp or paper mill it may not be so difficult to devise a method of making a sheet of pulp so that test values can be obtained showing reasonable agreement, as between test and test, where one worker is concerned using the same method and the same appliances. But when we come to extend the experiment firstly to different workers, and secondly to different mills and laboratories, then unless we have made very careful preparation we shall find that our test results are by no means in close agreement. It is of this "careful preparation" that we wish to speak this evening.

Bearing in mind the desirability of being able to produce a test sheet of what may be described as unbeaten pulp, *i.e.*, pulp in the condition in which it was received, as well as further sheets of the same pulp after subjection to regulated beating treatment, we are faced with the problem—when does a pulp cease to be unbeaten. To disintegrate a sheet of air-dry pulp sufficiently to permit of the production of a level test-sheet must involve some degree of "beating," and the decision, therefore, has to be made how far is it permissible to "beat" a pulp and still consider it "unbeaten."

In parenthesis, here, we would say that it would appear useful in practice to have information about the strength of the pulp as received for several reasons, chief among which is that such a test can be made relatively quickly and is therefore of much importance as a method of routine control of daily production in the paper mill.

To revert; the suggestion has been put forward that the "beating degree" (Schopper-Riegler) can be utilized as a measure of pulp condition. That is to say there are those who advocate that the raw pulp should be disintegrated, or beaten, until a certain fixed small degree of wetness has been attained as measured by the Schopper-Riegler. Such a method of standardizing the so-called "unbeaten" condition may prove satisfactory, but we are inclined to doubt it as we do not think the Schopper-Riegler instrument is sufficiently sensitive at low wetnesses, and in any event the readings of the instrument represent the combined effect of cutting and real wetting or hydration, and are therefore open to obvious criticism, since two disintegrating appliances may produce the same wetness (S. R.) and yet have very different actions upon the pulp during the disintegration process. Until the advocate of beating to a standard small-wetness S. R. prove their point we think it is preferable to standardize the disintegrating instrument and the method of using it.

Once a standard method for the production of an "unbeaten" pulp has been adopted, it is not a difficult matter to devise a suitable method for beating the pulp thus obtained under regulated conditions, and thus convert it into beaten pulp for evaluation as such. Having disintegrated our pulp it is now required to make it into a sheet suitable for testing. As already mentioned, pioneer work in this direction has been done by Wilen in Canada, and in that country as well as in U. S. A. and Europe a number of workers have been testing out his machine or slight modifications of it. In our own section's Proceedings, Clark has recently described a method which, though adopting the same principle followed by Wilen, shows considerable departure in design from that of the Canadian instrument. Our own experience has been with a modified Wilen type, but before describing our instrument we would like to point out the conditions which require to be fulfilled by any suggested sheet making device, and these are included in the following statement of what are considered to be the requirements of any proposed "standard method" for the testing of chemical wood pulps for strength.

The following conditions should be met by any proposed method.

General

A. The method should be applicable to all classes of chemical wood pulps.

B. The method should be such that it can be applied to measurement of the initial strength of all classes of chemical wood pulps, and be capable of extension to measurement of "beating quality" in terms of strength characteristics.

C. The method should be applicable to pulps in both moist and dry lap conditions (*i.e.*, as commonly received by the British papermaker).

D. The method must be such that the personal equation is reduced to a minimum, so that truly comparable results can be obtained by different workers.

E. The method should be such that the apparatus required can be manipulated correctly by anyone of average intelligence and ability.

F. The method should be such that well-known and accepted strength testing instruments can be applied.

Special

Any proposed method involving the preparation of test sheets from chemical wood pulps should satisfy the following requirements:—

G. Each sheet must be uniform in substance, bulk, look-through and finish.

H. The method must allow of a number of identical test sheets being made in any one test or experiment.

J. Test values obtained on individual sheets must be in reasonable agreement.

K. The average values of tests obtained on individual sheets must be in reasonable agreement as between sheet and sheet.

Note.—It is anticipated that as experience (experimental) progresses it will be possible in paragraphs J. and K. to substitute for the words "reasonable agreement" definite tolerances expressed in figures. With a view to meeting the above-mentioned conditions for the preparation of test sheets from wood pulps, both in the beaten and unbeaten states, the following apparatus has been used:—

1. Electrically driven disintegrating propeller and suitable pulp container.
2. Electrically driven "pebble mill."
3. Modified "Wilen" sheet-making machine.
4. Hand operated "ledger" press for couching.
5. Hydraulic high pressure press.
6. Electrically-heated drying cylinder.
7. Conditioning chamber.

The paper then gave brief descriptions of the apparatus and test methods employed.

TABLE 1

Unbeaten

EASY BLEACHING SULPHITE

Disintegrated three-quarter hour.

1	2 Mullen		3 Burst. Demy wgt.	4 Percentage variation in col. 3
Sheet 1 Dy. 35.17 lbs.	10 10 10 12 9 10 8.5	9.93 lbs. per sq. in.	0.2823	+ 4.3%
Sheet 2 Dy. 35.57	10 10 10 10 10 9 10	9.86	0.2766	+ 2.2%
Sheet 3 Dy. 33.4	9 9 8 9 7 9 7	8.30	0.2485	— 8.2%
Sheet 4 Dy. 35.3	10 10 10 11 9 9 9	9.71	0.2751	+ 1.66%
Mean Dmy. wt. 34.86		9.45	0.2706	.....

Test Results

Earlier on when dealing with the requirements to be met by any method for the preparation of test sheets it was there laid down that the sheets must be sufficiently well made to show reasonable uniformity as between tests on individual sheets and as between the average test values obtained for different sheets. Examination of the several samples now exhibited will enable you to form your own conclusions as to "look-through," etc. We consider the sheets are reasonably satisfactory and some test results appended will serve to support this view.

TABLE 2

Unbeaten.

STRONG SULPHITE

Disintegrated three-quarter hour.

1	2 Mullen		3 Burst. Demy wgt.	4 Percentage variation in col. 3
Sheet 1 Dy. 18.03 lbs.	11 11 11 9 10 11 11	10.57 lbs. per sq. in.	0.5807	— 4.9%
Sheet 2 Dy. 18.03	11 12 12 14 10 10 11	11.43	0.6339	+ 3.7%
Sheet 3 Dy. 18.27	9 10 10 10 11 11 10	10.0	0.5474	—10.4%
Sheet 4 Dy. 18.64	14 11 11 10 13 16 14	12.77	0.6820	+12.9%
Mean Dmy. wgt. 18.24 lbs.		11.18	0.6110	.....

The test results quoted refer to bursting strength only; tests of tearing and tensile strength have also been made and for the most part satisfactory agreement has been obtained. In this short paper we prefer to confine ourselves to examples of the bursting test.

Some test figures obtained for the beaten or beating strength of a kraft pulp are given to indicate what agreement is obtainable in this class of pulp as between sheet and sheet. After each beating period 4 sheets were tested for bursting strength by Mullen. The figures are:—(See Table 3).

TABLE 3

Beating Time	Demy wt.	Average	Burst	Average	Burst Demy	Average
2 hours	26.96		79.2		2.939	
	26.13	26.17	84.7	83.1	3.238	3.177
	26.29		83.7		3.183	
	25.31		84.7		3.347	
3 hours	25.08		91.1		3.632	
	24.68	24.81	86.3	85.63	3.497	3.452
	23.82		83.5		3.505	
	25.66		81.6		3.172	
4 hours	25.70		95.7		3.723	
	25.96	25.99	94.6	92.73	3.634	3.565
	25.85		91.7		3.547	
	26.44		88.9		3.354	
5 hours	26.40		100.7		3.814	
	27.13	26.84	100.1	103.0	3.690	3.836
	27.28		107.9		3.957	
	26.55		103.4		3.932	
6 hours	28.15		103.5		3.677	
	29.03	28.76	112.7	110.1	3.881	3.828
	28.45		109.6		3.852	
	29.40		114.7		3.901	

It is clear that it is of first importance to prove that using the same apparatus and conditions results can be repeated for any pulp. We consider that there is no doubt about this and have proved the contention many times to our own satisfaction. The results of one such test are appended:

TABLE 4

1st Test	2 hrs. beating Av. bursting grams per sq. meter	3 hrs. beating Av. bursting grams per sq. meter	4 hrs. beating Av. bursting grams per sq. meter
	16.9	20.2	19.9
	18.3	19.2	19.7
	15.3	19.3	19.1
	17.1	19.3	19.2
Mean	16.9	19.5	19.5
2nd Test			
	17.3	19.9	19.3
	17.3	19.3	19.3
	17.3	19.6	20.4
	16.4	20.1	18.5
Mean	17.1	19.7	19.4

We claim that our test results have a direct application in the mill, since it is our experience that our laboratory findings are borne out in practice; we have also had the satisfaction of having had our test figures on a hand sample exactly confirmed by similar tests on subsequent delivery in bulk—we claim that this is the first time this experience has been put on record in Great Britain.

The matter of testing pulps for strength is a much more difficult one than it would appear at first sight, but we see no reason to doubt that anything but benefit can accrue to mills and to the trade generally if the strength testing of pulps can be raised to a level at least something above that which presently obtains. Progress, however, should not be left to the efforts of the few or it will be slow. If British mills will come forward with a fair measure of support there is no reason why we should not contribute substantially towards the development of a universal method for testing wood pulps for strength. To do so will be to our advantage.

Rough and ready methods of testing for strength quality are worthless. Using apparatus such as that described it is possible to make test sheets from dry lap pulp which give test figures sufficiently uniform to warrant their application to purposes of mill control.

It is eminently desirable that a strength testing method should be standardized by the Technical Section, but it is evident that this cannot be accomplished without the adequate support and co-operation of a representative number of mills; as yet even the proof that results can be duplicated in unassociated laboratories is lacking.

The authors take the view that every effort should be made by the Technical Section P. M. A. to ensure that any standard method adopted should fall, as far as possible, into line with any existing methods which are operated by or have the approval of the appropriate Technical Associations of all other pulp using or pulp-producing countries of the world.

The authors desire to express their thanks to Messrs. Tullis, Russell and Co., Ltd., Markinsch, Fife, Scotland, in whose laboratories the work described was carried out, for permission to publish these results. They also desire to thank Mr. Cameron, who gave generous assistance in the practical work.

Steam Consumption in Digesters

The digester is undoubtedly one of the most important pieces of apparatus in the preparation of cellulose or of rag pulp, and it is therefore interesting to study its operation by calculating its steam consumption and thermal efficiency. The digester or boiler is essentially a closed, high-temperature container in which wood or straw is subjected to the delignifying action of a suitable liquor, or in which rags are merely cleaned and defibered by the action of an alkaline solution on the fatty materials which soil them.

The walls of the digester must be resistant to the action of the liquor used, and moreover their heat conductivity must be as low as possible to reduce heat losses.

Rag boilers and digesters in which cellulosic materials are treated with alkaline liquors do not require any inside lining, as iron is not attacked by alkalies, while a lining of acid-resisting brick or lead is necessary when disincrusting is carried out with acid liquors. As to lagging to prevent heat losses, this is of the utmost importance for all digesters, as we shall prove later on.

In order that the reactions may proceed at a sufficiently rapid rate the contents of the digester are raised to a temperature varying from 120 degrees C. to 175 degrees C. according to the nature of the material being treated and the quality of product desired, the higher temperatures being used for the production of cellulose and the lower ones for the cleaning and defibering of rags. Heat is introduced in the form of steam generated in the boiler plant and conveyed to the digester house or rag boiling room in lagged pipes. It is generally used at a pressure of from 3 to 10 atmospheres.

Calculation of Steam Requirements

The quantity of steam required for cooking is calculated as follows:

1) The amount of liquor required and the time and temperature of cooking are first determined by means of laboratory tests or from experimental data.

2) From these data a cooking curve is constructed with the time as abscissae and the temperatures as ordinates. It should be noted that we consider only the temperatures, and not the pressures, because the latter exerts a much smaller influence on the rate of the reaction than the temperature. Moreover, the pressure can easily be obtained from the temperature.

3) From the cooking curve the amount of steam required is calculated approximately from thermic principles. This gives what may be called the "effective theoretical steam consumption." This figure is of interest in calculating the steam cost of the cook and also for purposes of comparison with the steam consumption actually found in practice, as it furnishes the means of checking the actual thermal efficiency of the digester and of detecting losses or waste of heat.

From these observations we can deduce the true thermal efficiency of the digester. In this connection we shall not go into Lassberg's theories but shall retain of them merely a simplification giving the actual efficiency of the digester, *nb*, this efficiency being the ratio of the heat theoretically required to effect a given reaction in a predetermined length of time to the quantity of heat actually supplied to the digester by the steam:

$$nb = \frac{Ct}{c} \frac{\text{(Heat theoretically required)}}{\text{(Heat actually consumed)}}$$

The heat theoretically required for a given cook, which must not be confused with the "effective theoretical steam consumption," is calculated by considering the number of calories required to bring the cellulosic material and the liquor to the maximum temperature of the cooking curve, whereas the effective theoretical steam consumption is the sum of the heat theoretically required and of the steam which must be added to compensate for heat losses.

The value of this efficiency naturally rises as the time of cooking is shortened because the amount of heat theoretically required remains constant irrespective of the time of cooking, while the effective heat consumption decreases with the time of cooking; the fraction representing the efficiency thus increases in value since the numerator remains constant and the denominator decreases concurrently with the time of cooking. The highest efficiency in the following table is found in the case of straw boilers, because the time of cooking is relatively short and the temperature is not very high. The value of *nb* is as follows:

Unlagged rag boilers	45 to 60%
Lagged rag boilers	75 to 80%
Straw boilers	85 to 88%
Sulphite digesters	70 to 75%

In order to improve this efficiency efforts should be made to reduce heat losses to a minimum, such as: designing the digester so that it will have the lowest possible radiating surface in proportion to its volume, lagging the digester, emptying and charging the digester as rapidly as possible so as to utilize some of the heat remaining in the digester from the previous cook. Naturally, the value of *nb* can never be made equal to unity, as there are inevitable heat losses during the cook; and though improvements in technic will doubtless reduce these losses, they will never be completely eliminated.

It is interesting to see how the effective theoretical steam consumption per kilo of pulp can be calculated when the nature of the process and dimensions of the digester are known. This calculation is of value in determining the maximum thermal efficiency of the equipment as well as for predicting the cost of cooking. After the equipment has been installed the actual steam consumption is measured, and the value of *nb* is calculated and compared with the value for other installations so as to find out how it can be improved.

Amount of Heat Required for Cooking

The quantity of heat C required for cooking is obtained as follows:

$$C = C_t + C_a + C_p + C_d \qquad (1)$$

in which:

C_t = heat theoretically required to raise the raw material and the liquor to the maximum cooking temperature;
C_a = heat required to raise the moisture content of the rags to the maximum temperature and evaporate it;
C_p = heat required to bring the digester to the maximum temperature;
C_d = heat lost by radiation, conduction and convection.

Determination of C_t

We have

$$C_t = Q_m C_m (t_m - t_1) + Q_L C_L (t_m - t_r) \qquad (2)$$

in which:

Q_m = oven-dry weight of the cellulosic material;
Q_L = weight of liquor;
C_m = mean specific heat of the cellulosic material;
C_L = mean specific heat of the liquor;
t_1 = initial temperature of the raw material;
t_r = initial temperature of the liquor;
t_m = maximum cooking temperature.

NOTE—In order to obviate the tedious determinations required to obtain C_L we prefer to take it as being the sum of the amount of heat required to increase the temperature of the water in the liquor on the one hand, and the amount of heat required to raise the temperature of the reagents dissolved or suspended in the liquor, on the other. This is the procedure we adopted in the examples given hereafter.

Determination of C_a

We have:

$$C_a = q_m (t_m - t_1) \qquad (3)$$

in which

q_m = weight of the moisture content of the raw material.

Determination of C_p

C_p is given by the formula:

$$C_p = Q_a C_a (t_{ma} - t_a) + Q_b C_b (t_{mb} - t_b) \qquad (4)$$

This represents the amount of heat required to raise the tem-

Translated from *Le Papier* xxx, 1291-1296, December, 1927, by A. Papineau-Couture.

perature of the walls of the digester, and it has as many terms as there are layers to the walls:

Q_a = weight of layer a;
C_a = specific heat of the layer a;
t_{ma} = average maximum temperature of layer a during cooking;
t_a = average initial temperature of layer a.

Determination of C_d

Let us consider now the last term of equation (1), which represents the amount of heat given up by the digester to the surrounding medium. In the cooking curve three distinct periods should be considered: the heating up period, the time at maximum temperature, and the cooling period.

The heating up period may be defined as the one during which the amount of heat supplied to the digester in unit time is greater than the amount transmitted by the digester to the surrounding medium. The period at maximum temperature or of thermal equilibrium is the one during which the amount of heat supplied to the digester in unit time is equal to the amount transmitted by the digester to the surrounding medium; while during the cooling period more heat is lost by the digester to the surrounding medium than is supplied to the digester. These three periods should be indicated on the curve, and by integrating the value of C_d may be found.

More simply, an approximation sufficient for practical purposes may be obtained by assuming that the phenomenon takes place at constant temperature, and for this purpose we take the maximum temperatures indicated on the curves.

In that case we have:

$$C_d = F.K.d(t_m - t_e) \qquad (5)$$

in which:

t_m = maximum cooking temperature;
t_e = temperature of the surrounding medium;
d = time of cooking;
K = mean heat transmission coefficient;
F = surface of the digester.

Value of the Coefficient K

The coefficient K represents the amount of heat lost per hour per square meter of digester surface per degree C. difference in temperature between the inside and outside of the digester. It is given by the formula:

$$\frac{1}{K} = \frac{1}{a_1} + \frac{\delta_1}{\lambda_1} + \frac{\delta_2}{\lambda_2} + \ldots\ldots\ldots + \frac{1}{a_2} \qquad (6)$$

in which:

a_1 = coefficient of heat transmission between the digester and the liquor (number of calories per hour, per square meter, per degree C. transmitted from the inside of the digester to the internal surface of the digester shell);

$\frac{\delta_1}{\lambda_1} + \frac{\delta_2}{\lambda_2} + \ldots\ldots\ldots$ each of these fractions is the ratio of the thickness of one layer of the digester wall to its heat conductivity. There are naturally as many terms as there are layers in the digester walls;

a_2 = coefficient of heat transmission from the outer surface of the digester shell to the surrounding medium.

This coefficient a_2 is itself given by the expression:

$$a_2 = a_L + a_C + a_I$$

in which:

a_L = coefficient of heat transmission through conduction;
a_C = coefficient of heat transmission by convection;
a_I = coefficient of heat transmission by radiation.

Furthermore, we have:

$$a_L + a_C = 2.2\sqrt[4]{t_{fe} - t_e}$$

in which:

t_{fe} = temperature of the external surface of the digester;
t_e = temperature of the surrounding medium.

We also have:

$$a_I = \sigma C$$

where

$$\sigma = \frac{\left(\frac{273 + t_{fe}}{100}\right)^4 - \left(\frac{273 + t_e}{100}\right)^4}{t_{fe} - t_e}$$

while the radiation coefficient C is given by the formula:

$$\frac{1}{C} = \frac{1}{C_e} + \frac{1}{C_f} - \frac{1}{C_a}$$

in which:

C_e = radiation coefficient of the metal shell of the digester;
C_f = radiation coefficient of the digester lining;
C_a = radiation coefficient of an absolutely black body = 4.7.

Application

We shall now apply these formulas to a concrete example to show the value of lagging in the case of an ordinary rag boiler.

Raw material—cotton rags.

Cooking conditions—maximum temperature 151.1 degree C., time of cooking 12 hours.

Diameter of spherical digester—2.50 meters.

Capacity of digester—8.150 cubic meters.

Alkali—(soda ash) sh kilos as a tenper cent solution = 120 liters of liquor.

Lime—130 kilos in the form of a 5 per cent milk of lime = 2,600 liters of liquor.

Total liquor—2,720 liters.

Rags—1,250 kilos, 90 per cent dry, containing 1,125 kilos of oven-dry material.

Moisture content of the rags—125 kilos.

Initial temperature of the liquor and rags—15 degrees C.

Atmospheric temperature—20 degrees C.

We have

$$C_t = C_e + C_L$$

in which C_e is the amount of heat required to bring the rags up to cooking temperature and C_L is the amount of heat required to bring the liquor up to cooking temperature. We shall take the specific heat of the rags as 0.32, that of the lime as 0.19, and that of a 10 per cent soda solution as 0.89.

Whence

$C_e = 1125 \times 0.32(151.1 - 15) = 49{,}000$ calories.
$C_L = [(130 \times 0.19) + 2600 + (120 \times 0.89)] \times (151.1 - 15) = 372{,}000$ calories.
$C_t = 49{,}000 + 372{,}000 = 421{,}000$ calories.
C_d is calculated according to formula (3), which gives
$C_d = 125 \times (151.1 - 15) = 17{,}000$ calories.

As regards the calculation of C_p and C_d, we shall distinguish two different cases according as to whether the boiler is or is not lagged.

Unlagged Iron Boiler

C_p is calculated according to formula (4), which presupposes a knowledge of the average temperature of the boiler shell. This is obtained by finding the mean temperature of the internal and external surfaces of the shell. Let

t_{f1} = temperature of the internal surface,
t_{fe} = temperature of the external surface.

They are found from the equations:

$$t_{f1} = t_m - \frac{K}{\frac{a_1}{K}}(t_m - t_e')$$

$$t_{fe} = t_e + \frac{K}{a_2}(t_m - t_e)$$

The direct mathematical solution of the problem would lead to rather complicated equations because the value of a_2 is a function of both t_{f1} and t_{fe}. It is therefore preferable to proceed by successive approximations which, after experimental tests, gave us the following values:

$a_1 = 5{,}000$
$a_2 = 15.15$
$K = 15.02$

from which we obtain:

$t_{f1} = 150.7°$
$t_{fe} = 150°$

so that the mean temperature of the boiler shell is

$$\frac{150.7 + 150}{2} = 150.35°$$

As to the weight of the boiler, supposing it has an internal diameter of 2.50 meters and walls 12 mm. thick, the weight of iron will be 1,840 kilos, or, say, 2,000 kilos to allow for fittings in contact with the boiler which also absorb some heat.

Hence, taking 0.115 as the specific heat of the sheet iron and assuming that the initial temperature of the shell is 40 degrees C., we have:

$C_p = 2000 \times 0.115(150.35 - 40) = 26{,}300$ calories.

C_d is calculated according to formula (5). In this case the surface F is 19.63 square meters, and the other values are known, so that we have:

$C_d = 19.63 \times 15.02 \times 12(151.1 - 20) = 461{,}000$ calories.

Lagged Boiler

If the boiler is lagged with a layer of kieselguhr 0.025 meter (about 1 inch) thick, in order to obtain C_d and C_p we must first calculate:

t_{t1} = temperature of the internal iron surface;
t_{te} = temperature of the outer surface of the lagging;
t_{tm} = temperature of the contact surface of the iron and lagging.

These values are given by the following formulas, where in each case sub-1 refers to the iron shell and sub-2 to the layer of lagging.

$$t_{t1} = \frac{1}{\frac{\lambda_1}{\delta_1} + \alpha_1}\left(t_{tm}\frac{\lambda_1}{\delta_1} + t_m\,\alpha_1\right)$$

$$t_{te} = \frac{1}{\frac{\lambda_2}{\delta_2} + \alpha_2}\left(t_{tm}\frac{\lambda_2}{\delta_2} + t_e\,\alpha_2\right)$$

$$t_{tm} = \frac{1}{\frac{\lambda_1}{\delta_1} + \frac{\lambda_2}{\delta_2}}\left(t_{t1}\frac{\lambda_1}{\delta_1} + t_{te}\frac{\lambda_2}{\delta_2}\right)$$

As a result of various calculations and experiments, we finally arrived at the following values:

$$\frac{\alpha_1}{\frac{\delta_1}{\lambda_1}} = 5000 \qquad \frac{\alpha_2}{\frac{\delta_2}{\lambda_2}} = 10.04$$

$$\frac{\delta_1}{\lambda_1} = 0.00024 \qquad \frac{\delta_2}{\lambda_2} = 0.294$$

$$K = 2.54$$

whence:

$t_{te} = 53°$
$t_{t1} = 151°$
$t_{tm} = 150°$

and the mean temperature of the lagging is

$$\frac{150 + 53}{2} = 102°\text{C.}$$

Taking the weight of the shell proper as 1,840 kilos, because the heating of adjacent fittings is almost negligible in this case, and taking the weight of the lagging as about 200 kilos, we have:

$$C_p = C_p' + C_p'' = 1840(150.5 - 45)0.115 + 200(102 - 40)0.18 = 24{,}436 \text{ calories.}$$

C_d is again calculated according to formula (5). Surface F in this case is equal to 20.4 square meters. We therefore have:

$$C_d = 20.4 \times 2.54 \times 12(151.1 - 20) = 81{,}600 \text{ calories.}$$

Comparison of Heat and Steam Consumption of Lagged and Unlagged Boilers

	Lagged Boiler	Unlagged Boiler
C_t	421,000 calories	521,000 calories
C_a	17,000	17,000
C_p	26,300	24,450
C	461,000	81,600
	925,000	544,050
η_b	$\frac{421{,}000}{925{,}300} = 45.5\%$	$\frac{421{,}000}{544{,}050} = 77.4\%$
Calories per kg. oven-dry rags	$\frac{925{,}000}{1{,}125} = 823$	$\frac{544{,}050}{1{,}125} = 483$
Consumption of saturated steam at a pressure of 5 atm., capable of giving up 505 calories per kg.	$\frac{823}{505} = 1.63$ kg.	$\frac{483}{505} = 0.95$ kg.
Steam consumption per kg. of air-dry rags	$\frac{1.63}{0.90} = 1.81$ kg.	$\frac{0.95}{0.90} = 1.05$ kg.

It is thus seen that the saving is considerable, especially when we consider the low cost of kieselguhr and the ease of its application.

Basic Colors for Dyeing Paper

By Fred. Grove-Palmer, A. I. C.

At the time wood pulp came into wide use the methods used in dyeing papers also underwent a change. The actual date of the introduction of woodpulp for the manufacture of paper on a commercial scale appears to be about 1866, so some authorities place it a little earlier than that, and the world, the dyeing-world, that is, was still standing in wonderment at the newly invented Aniline or synthetic dyestuffs that had reached the market during the years 1856 to 1860. The removal of the English excise duty from paper in 1869 had a strongly repercussive effect upon the paper trade of the whole world and it opened up fresh markets for the makers in many parts of North America. The requirements of paper increased tremendously and as a consequence the business of getting dyes that were suitable for coloring the many new kinds of papers that were brought into being became a matter of grave concern with the manufacturers.

Once more, since the war, there has been a sort of revolution brought about, this time by the increase of domestic dyes made to counteract the stigma that was implied upon the scientific brains of the country by the virtual monopoly held up to within the last fifteen years by the Germans. The outcome of this endeavor has been the production of coloring matters that are at least as good as the others and, it may be said, without undue boasting, in many cases even better.

Coloring materials that are intended for use in the tinting of papers of various grades should be chosen with considerable care, for there are a number of details that should be thought out and duly weighed if the poor results are to be avoided. The consideration that is, perhaps, most important of all and which will have the greatest influence upon the selection of dye, is: the use to which the paper is to be put. For it is very evident that a color which may be eminently suitable for the linings of books or candy-boxes will not of necessity be of the faintest use if employed in the production of highest grade wall papers.

Non Uniform Results

There is also the fact that a color will not yield the same shade on all kinds of pulp, a point that can easily be proven by making experimental dyeings on, say, rag, bleached sulphite, kraft, unbleached sulphite and a mixture of unbleached sulphite and ground wood. A Basic Brown BR, to quote one instance will give five quite different shades on those various pulp stocks. In addition to this it has often been shown that the same dye in the same quantity will give different shades on two batches of what is ostensibly pulp of the same composition. Of course, it is exceedingly difficult to guarantee that two batches will have the same composition as there are so many chances for variations to occur, as for example in the use of different quantities of the woods that may be used in the first stages of the manufacture.

It naturally arises from the consideration of the points that it is very necessary when the orders are to match up to a shade that the testing shall be done upon part of the actual batch of stock that is to be used for filling. It is not good practice for the paper-dyer to pick his shade from the manufacturer's pattern card, and then grumble that his result is different; it is bound to be. There are many possible ways in which differences can arise and some of them are certain to be met every time.

Desirability of Basic Colors

There are six different classes of dyestuffs that are in general use in the paper trade, some are not very important; three of them occupy a big position in the interests of the trade and among them, the basic colors hold an important position. The call for these dyes is greatest when the business demands extreme brilliance of color, enhanced tinctorial efficiency and cheapness. Those are three requisites that are common enough and to them the basic dyes will stand up, although it is not claimed for them that they are in any way good as regards fastness to washing and they are fugitive when exposed to sunlight.

There is a very considerable usage of basic colors amongst makers of wrappings, cheap wall-papers, leatherboard, boxboard, news and kraft; they are also in great demand for fancy colored sheets, their high tinctorial and staining power making them especially useful for such applications.

Technique of Adding Color

The dyeing may be done in the beater before or after the sizing has been added; this is the most usual method of application. It is also possible to obtain very good results by dipping paper in the majority of basic colors.

A typical formula is as follows: To every one hundred and twenty gallons of pulp in the beater which is generally run to contain five per cent of dry stock, is added ten gallons of resin soap. This is made up by boiling two pounds of colophony rosin with sufficient sodium carbonate crystals to entirely saponify it. When that has been put in there is a further addition of four and three quarter gallons of a solution of alum containing half a pound in one gallon and a quarter. Aluminum sulphate may be substituted for alum, and some makers prefer to add half the quantity of alum before they put in the rosin soap and follow this with the remaining half of the alum. When the process is carried on in what may be termed the usual way there is a precipitation of aluminium resinate on to the cellulose fibers, and when this has taken place the dye is put in.

Preparing the Color Solution

The coloring matter should always be very carefully dissolved. Too often, in the course of investigations and inquiries, it has been found that the customer has unjustifiable cause for complaint largely because of careless addition of the dye to the pulp in the beater. The greater number of the basic dyes will produce mottling very easily, and if undissolved particles of the color are allowed to enter the beater, their affinity for the fiber is so great that a small area is much more deeply stained than the rest and this may not be evenly distributed through the batch, consequently, deeply colored patches may be found in the finished sheet.

The proper method of dissolving the dyestuff, as is set down by leading manufacturers and technicians, is as follows: The powder is mixed to a paste with cold water and then hot, but not boiling water is stirred in. This solution is strained through fine muslin into a pail and any specks of dye that are found remaining on the cloth are dissolved by pouring boiling water over them, unless the maker has notified that the dye is unstable in water above 160 deg. F. as some of them are. The reason for adopting these precautions is that when boiling water is poured straight onto a quantity of dyepowder at the bottom of the pail there is a strong tendency for it to get balled up. When this occurs it takes considerable time and much stirring to get it properly into solution. When the color has been completely dissolved it is added in several parts to the contents of the beater.

Another precaution that must be taken to prevent waste of color is to insure that there be no excess of alum in the beater. This salt has an acid reaction and will therefore cause a certain amount of stripping of the color which produces colored backwaters, and hence loss of dye.

Fasteners Aided by Tannin

When the call is for light shades such as require anything from 0.25 per cent up to 0.5 per cent of the dyestuff, based upon the dry weight of the paper stock the basic dyes are quite fairly fast to light and water, even with unsized papers. It will not, however, be safe to use them for high grade wall-papers, poster work or book-covers. The fastness of full and mid shades on unsized papers may be greatly increased by the addition of about 0.1 per cent of some form of tannin. The extract of sumach is largely favored in the paper industry although better results are obtained by the use of commercial tannic acid. This is, however, rather more expensive, though the quantity required is so small that the question of price is not of very great moment. Apart from its value in increasing the general fastness of the color, the effect of tannin being to aid in the exhaustion of the bath, it also has another effect, namely, to reduce the absorptiveness of the paper by reason of its astringent quality. It is therefore inadvisable to make use of it when coloring blottings and other papers in which absorption is a quality desired.

The textile industry uses a very large number of colored paper pirns; these are sized, and it is essential that there shall be no trace of bleeding, for the yarn that is wound on to the pirns is frequently humidified in the course of the work in the weaving-rooms, and should there be any transferrence of color to the cotton or silk, great trouble might arise. Some paper makers find that by adding tannin to these papers gives the degree of color fastness desired.

In making mixtures of sulphite pulp and ground wood pulp, there is often a tendency towards the production of mottled effects because one of these pulps has a greater affinity for the basic dyes than the other. Which of the two is the culprit is not easy to state definitely for whatever may be the particular views of the men who study the subject practically, they will find that recognized authorities are often opposed to each other on this point. One well-known practitioner states quite certainly that the ground wood fibers are more intensely colored than the rest, and another of equal weight announces that ground wood dyes less readily than sulphite pulp unless it has been exceptionally finely ground in the beater. When a difficulty of this order arises the quick way out is to use a different class of dye with which the mottling effect does not take place.

Suitable Dyestuffs

In the following list of suitable dyestuffs for paper belonging to the basic classification those marked (A) are of American manufacture; those with (I) are imported; the rest are obtainable from either source.

Auramine O	Basic Blue (I)
Chrysoidine	Victoria Blue
Bismark Brown	Methylene Blue
Safranine	Victoria Green (A)
Rhodamines	Kraft Brown
Magenta (I)	Basic Black A extra (I)
Fuchsine NB (A)	

The above list, of course, makes no pretense at being more than a very brief indication of the distribution of suitable basic dyes for the coloring of paper stock.

It may be mentioned in conclusion that in many cases in which other classes of dyes must be used in order to produce colors of greater fastness, if a brighter shade is required a corresponding basic dye may be used for the final dyeing. When this is done, the first dyebath will need to be thoroughly exhausted before the basic color is put into the beater.

District of Columbia Paper Co. TAPPI Member

The District of Columbia Paper Company, operating the only paper mill in Washington, D. C., has just become a corporate member of the Technical Association. This company has earned an enviable reputation in the paper industry as a manufacturer of colored specialties. In addition to making the paper the D. of C. Paper Company colors, embosses and prints the designs required by the purchaser. To do this successfully it is necessary to maintain an expert staff of artists, engravers and printing house craftsmen. The well known "Artillery Blotting" paper is one of the mill products. Other papers made include box cover, index bristol and deckle edge book. The District of Columbia Paper Company is one of the few companies that manufacture soda pulp from conifers. The company has been represented in the Technical Association by D. A. Smith, H. R. Harrigan and J. M. Krauss. Mr. Smith, vice president, has been a member of TAPPI from its inception.

Dr. Joachim Goes to Container Corporation

Dr. Herman L. Joachim, technical director of the Central Paper Company of Muskegon, Mich., has resigned this position to join the technical staff of the Container Corporation in Philadelphia, Pa.

Dr. Joachim is chairman of the TAPPI Committee on Corrosion and Waste Problems and has been working enthusiastically to get this important part of the Technical Association of the Pulp and Paper Industry work under way. He has also been a valuable member of the Committees on Sulphate Pulp and Training for the Industry.

United States Patents on Paper Making

Issued From April to June, 1928

Prepared by Clarence J. West, Chairman, Committee on Abstracts and Bibliography

1,664,675. Duplicating. David Gestetner, assignor to D. Gestetner, Ltd., London, England. (Cl. 31-38.6.) Apr. 3, 1928. (Stencil sheet.)

1,664,722. Cylinder paper-making machine. Arthur T. Yoder, Mosinee, Wis. (Cl. 92-43.) Apr. 3, 1928. (Vat for the cylinder mold.)

1,664,777. Stencil sheet. Shinjiro Horii, Kanda-Ku, Tokyo, Japan. (Cl. 41-38.6.) Apr. 3, 1928.

1,664,801. Suction box. John Warren Vedeer, assignor to Rice, Barton, and Fales, Inc., Worcester, Mass. (Cl. 92-51.) Apr. 3, 1928.

1,664,837. Plaster board. Joseph Strand, assignor to Klinch Lath Corporation, Los Angeles, Calif. (Cl. 72-124.) Apr. 3, 1928.

1,664,996. Centrifugal pulp screen. George F. Shevlin, assignor to George F. Shevlin & Sons, Glen Falls, N. Y. (Cl. 92-34.) Apr. 3, 1928.

1,665,168. Wall board. Edwin L. Gustafson, assignor to United States Gypsum Company. (Cl. 154-45.9.) Apr. 3, 1928.

1,665,425. Method and apparatus for regulating the consistency of pulp stock and the like. Charles R. van de Carr, Jr., Quebec, Canada. (Cl. 92-46.) Apr. 10, 1928.

1,665,576. Bag of paper or other flexible material. Carl A. Witham, Minneapolis, Minn. (Cl. 229-53.) Apr. 10, 1928.

1,665,580. Manufacture of stencil sheet. Alex Brooking Davis, assignor to A. B. Dick Company, Chicago, Ill. (Cl. 41-38.6.) Apr. 10, 1928.

1,665,611. Method of and apparatus for making gummed paper. William Henry Smith and Albert Stewart Webster, assignors to American Bank Note Company, New York City. (Cl. 91-55.) Apr. 10, 1928.

1,665,614. Paper-making machine. Charles W. Valentine, assignor to The Bagley and Sewall Company, Watertown, N. Y. (Cl. 34-4.) Apr. 10, 1928. (Drying roll.)

1,665,644. Cutting mechanism for pulp and like machines. Charles W. Sponsel, assignor to Case and Marshall, Incorporated, Hartford, Conn. (Cl. 92-67.) Apr. 10, 1928.

1,665,834. Mechanism for cutting paper shell blanks from continuous rolls of paper. William T. Ayer, assignor to Hercules Powder Company, Wilmington, Del. (Cl. 164-68.) Apr. 10, 1928.

1,666,029. Imprinting device. Daniel D. Madden, Portland, Ore. (Cl. 8-19.) Apr. 10, 1928. (Means for imprinting on paper a plurality of tones with one dye.)

1,666,030. Imprinted paper. Daniel D. Madden, Portland, Ore. (Cl. 41-26.) Apr. 10, 1928.

1,666,031. Process of producing imprinted paper Daniel D. Madden, assignor to Pacific Northwest Paper Mills, Inc., Portland, Ore. (Cl. 8-5.) Apr. 10, 1928.

1,666,034. Indicator for automatic slowness testers. Milton O. Schur, assignor to Brown Company, Berlin, N. H. (Cl. 92-38.) Apr. 10, 1928.

1,666,035. Machine for use in making boxes. Charles J. Westin, assignor to Wirebounds Patents Company. (Cl. 1-8.2.) Apr. 10, 1928.

1,666,472. Paper-making machine. Christian Seybold, Duren, and Josef Boltersdorf, Kreuzau, near Duren, Germany. (Cl. 92-47.) Apr. 17, 1928. (Suction roll and sieve.)

1,666,214. Method of coating cores. John Shirley Little, assignor to Western Electric Company, Incorporated, New York City. (Cl. 92-41.) Apr. 17, 1928.

1,666,587. Beating engine. Reinhold M. Wendel, Stockholm, Sweden. (Cl. 92-22.) Apr. 17, 1928.

1,666,687. Paperboard-cutting machine. Charles Everett Colgrove, Toronto, Ontario, Canada. (Cl. 164-43). Apr. 17,, 1928.

1,666,696. Process for utilization of lignin. Robert Griessbach and Julius Eisele, assignors to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. (Cl. 260-137.) Apr. 17, 1928. (The material is extracted with an halogen containing solvent.)

1,667,292. Machine for making elastic paper. William A. Lorenz, assignor to The Otaka Fabric Company, Hartford, Conn. (Cl. 92-69.) Apr. 24, 1928. (Crinkling paper webs.)

1,667,516. Recording device for paper machines. Charles J. Guenther, assignor to Stickle Steam Specialties Company, Indianapolis, Ind. (Cl. 234-1.) Apr. 28, 1928. (Device for recording the tautness of the sheet of paper during its manufacture.)

1,667,691. Proofed paper. James Reid, assignor to The Scutan Company. (Cl. 91-70.) Apr. 28, 1928. (Method of adding bituminous proofing material.)

1,667,755. Flow-evener roll for paper-making machines. Charles W. Valentine, assignor to The Bagley and Sewall Company, Watertown, N. Y. (Cl. 92-44.) May 1, 1928. (Device for headboxes of paper making machines.)

1,667,853. Paper backing and process of coating the same. Gerhardt E. Grimm, assignor to Westfield River Paper Company, Russell, Mass. (Cl. 91-68.) May 1, 1928. (Paper having a coating of a hard resin, a soft resin and a vegetable oil.)

1,667,854. Rubber-sheet material for manufacturing. Gerhardt E. Grimm, assignor to Westfield River Paper Company, Russell, Mass. (Cl. 91-68.) May 1, 1928. (Thick film of soft rubber on a backing of paper surfaced with a smooth uniform, even coating of a soluble silicate, dextrin and glycerol.)

1,667,969. Wood splitter. Otto Reuben Guderian, Dundurn. Saskatchewan, Canada. (Cl. 144-198.) May 1, 1928.

1,667,975. Paper box. Elie W. Labombarde, Nashua, N. H. (Cl. 229-33.) May 1, 1928.

1,667,996. Barking drum. Peder Pederson Westbye, Peterborough, Ontario, Canada. (Cl. 144-208.) May 1, 1928.

1,668,044. Method of making bags. Herman Burgsdorf, assignor to The Frank A. Rolling Company, Inc., Philadelphia, Pa. (Cl. 93-35.) May 1, 1928.

1,668,135. Folding rolls for paper-folding machines. Henry A. Wise Wood, assignor to Wood Newspaper Machinery Corporation, New York City. (Cl. 101-420.) May 1, 1920.

1,668,141. Apparatus for producing and feeding paper pulp. Ralph Swan Clarke, assignor to Bird Machine Company. (Cl. 92-36.) May 1, 1928.

1,668,349. Paper article and method of manufacture. Ewald G. Baum, assignor to American Seal-Kap Corporation, Natick, Mass. (Cl. 18-56. May 1, 1928.

1,668,372. Tension envelope. Charles P. Kleebauer and Robert M. Lackey, assignors to Cohoes Envelope Co., Cohoes, N. Y. (Cl. 229-77.) May 1, 1928.

1,668,446. Process of shredding and drying pulp. Ossian Anderson, assignor to Fidalgo Pulp Manufacturing Co., Ancortes, Wash. (Cl. 34-24.) May 1, 1928.

1,668,542. Paper bag. Adelmer M. Bates and Albert Krasa, assignors to Bates Valve Bag Corporation, Chicago, Ill. (Cl. 229-62.) May 8, 1928.

1,668,549. Folding box. Luther P. Brown, assignor to Lion Carton Company, Inc., Red Lion, Pa. (Cl. 229-29.) May 8, 1928.

1,668,579. Rotary screen. Joseph A. White, assignor to The Moore and White Company, Philadelphia, Pa. (Cl. 92-36.) May 8, 1928.

1,668,593. Paper-finish tester. Charles H. P. Jones, Sault Ste. Marie, Ontario, Canada. (Cl. 265-10.) May 8, 1928.

1,668,874. Duplex envelope. David W. Snyder, Chicago, Ill. (Cl. 229-72.) May 8, 1928.

1,668,961. Paper-mill sludge composition. August E. Hansen and Albert C. Ruger, New York City and Wollaston, Mass. (Cl. 06-23.) May 8, 1928. (Use of paper mill sludge in a plastic composition.)

1,668,985. Envelope. Lowe E. Simpson, Cincinnati, Ohio. (Cl. 229-72.) May 8, 1928.

1,669,011. Laminated paper machine. Irving A. Newcomer, assignor to The Consolidated Paper Company, Monroe, Mich. (Cl. 92-42.) May 8, 1928.

1,669,012. Drier. Otto Nordström, Sundsvall, Sweden. (Cl. 34-34.) May 8, 1928.

1,669,029. Apparatus for screening pulp and the like. Rudolf Ernst Wagner, Karlstad, Sweden. (Cl. 92-34.) May 8, 1928.

1,669,234. Process and apparatus for treating fibrous materials for pulping purposes. Thomas L. Dunbar, assignor to Chemipulp Process, Incorporated, Jefferson County, N. Y. (Cl. 92-7.) May 8, 1928. (Process of chemically digesting fibrous material while introducing steam into the same, permitting the steam to condense and mix with the liquor used for digesting purposes.)

1,669,307. Feeding mechanism. Erik Säll, assignor to Aktiebolaget A. Ekströms Maskinaffär, Stockholm, Sweden. (Cl. 92-46.) May 8, 1928.

1,669,412. Stock-consistency regulator for paper machines. Mathias de Zurik, Sartell, Minn. (Cl. 92-46.) May 15, 1928.

1,669,426. Method of producing articles from fibrous-pulp material. George E. Shaw, Chicago, Ill. (Cl. 92-59.) May 15, 1928.

1,669,429. Method and machine for making vulcanized fiber. George W. Temple, Flushing, N. Y. (Cl. 154-34.) May 15, 1928.

1,669,454. Cardboard box. Francis Robert Close, assignor to The Duncan Lithographing Company, Limited, Hamilton, Ontario, Canada. (Cl. 229-39.) May 15, 1928.

1,669,713. Apparatus for making paper tubes. Carl G. Kronmiller, assignor to Bates Valve Bag Corporation, Chicago, Ill. (Cl. 93-20.) May 15, 1928.

1,669,750. Envelope. Gust Harmouth, Yale, Okla. (Cl. 229-84.) May 15, 1928.

1,669,774. Paper-drying machine. Michael J. O'Malley, Chicago, Ill. (Cl. 34-4.) May 15, 1928.

1,669,885. Method and mechanism for marking and finishing paper. Stuart W. Webb and Albert Allen, assignors to Eastern Manufacturing Company, Boston, Mass. (Cl. 101-23.) May 15, 1928. (The paper, interposed between fabric layers, and the marking element, are subjected to heavy pressure and simultaneously effecting a slight slip between the paper and fabric.)

1,669,966. Method of and apparatus for forming articles from paper and the like. Robert Beardsley, Chicago, Ill. (Cl. 93-1.) May 15, 1928.

1,670, 113. Paper drying machine. Albert Dex Harrison, Montreal, Canada. (Cl. 34-5.) May 15, 1928.

1,670,156. Method for cooking wood to form chemical paper stock. Wallace H. Howell, Jr., Willsboro, N. Y. (Cl. 92-7.) May 15, 1928.

1,670,181. Beater for paper-making machines. John Simpson Beck, Manville, N. J. (Cl. 92-24.) May 15, 1928.

1,670,182. Paper making machine. John Simpson Beck, Manville, N. J. (Cl. 92-43.) May 15, 1928.

1,670,183. Beater. John Simpson Beck, Manville, N. J. (Cl. 92-24.) May 15, 1928.

1,670,723. Barking apparatus. Frederick E. Hummel, Hopewell, Va. (Cl. 144-208.) May 22, 1928.

1,670,873. Threader for paper drying machines. Lorenzo M. Avenson, St. Paul, Minn. (Cl. 34-48.) May 22, 1928.

1,670,874. Means for reclaiming suspended solids from white water of paper manufacture. Albert Bankus and George S. Backus, Portland, Ore., and San Francisco, Calif. (Cl. 92-20.) May 22, 1928.

1,670,884. Paper making machine. Paul Erkens, Duren, Germany. (Cl. 92-45.) May 22, 1928. (Wire cloth and shaking frames.)

1,671,050. Method of making reenforced bags. George C. Snyder, assignor to Kaelma Manufacturing Company, Inc., New York City. (Cl. 93-35.) May 22, 1928.

1,670,473. Mechanical screen, strainer and the like. Samuel Milne, Edinburgh, Scotland. (Cl. 92-35.) May 22, 1928.

1,671,493. Dryness controller. Stephen A. Staege, assignor to Westinghouse Electric & Manufacturing Co., Pittsburgh, Pa. (Cl. 34-48.) May 29, 1928.

1,671,612. Paper for wiping engraved printing plates. Thomas M. Royal, Philadelphia, Pa. (Cl. 101-168.) May 29, 1928.

1,671,656. Acid proportioning and control system for sulphite mills. Charles Oland Sisler, Sault Ste. Marie, Ontario, Canada. (Cl. 92-11.) May 29, 1928.

1,671,716. Machine for folding napkins. Aaron Groff, assignor to Groff Paper Company, St. Paul, Minn. (Cl. 270-71.) May 29, 1928.

1,671,775. Paper bag. Joseph W. C. Meikle. (Cl. 223-54.) May 29, 1928.

1,672,097. Reenforced-edge plaster board. John Schumacher, Los Angeles, Calif. (Cl. 154-45.9.) June 5, 1928.

1,672,188. Folding paper box. William Wolfe, Alsace Township, Pa. (Cl. 229-34.) June 5, 1928.

1,672,249. Apparatus for making composition boards or sheets. George H. Ellis, St. Paul, Minn. (Cl. 92-39.) June 5, 1928.

1,672,262. Felted fibrous waterproof sheet. Lester Kirschbraun, Chicago, Ill. (Cl. 92-21.) June 5, 1928.

1,672,300. Barking drums. Burl Branch, Toronto, Ontario, Canada. (Cl. 144-208.) June 5, 1928.

1,672,579. Composite waterproof sheet and process of making the same. Charles Hanson Rayner, St. Johns, Quebec, Canada. (Cl. 28-4.) June 5, 1928.

1,672,705. Sized cellulose fiber product and process of making. Lawrence Bradshaw, Bainbridge, N. Y. (Cl. 92-21.) June 5, 1928. (Size includes peanut meal and casein.)

1,672,895. Preparation of cellulose. Prosper Jean Auguste Maignen, Philadelphia, Pa (Cl. 92-13.) June 12, 1928.

1,672,973. Method for coating cores. Henry Fleetwood Albright, assignor to Western Electric

Company, Chicago, Ill. (Cl. 18-59.) June 12, 1928.

1,672,988. Plied sheet and method of producing the same. Izador J. Novak, assignor to The Raybestos Company, Bridgeport, Conn. (Cl. 92-42.) June 12, 1928.

1,673,038. Safety envelope. Frank Bogaskie, Johnstown, N. Y. (Cl. 229-80.) June 12, 1928.

1,673,047. Method of and apparatus for forming fibrous-pulp receptacles. Jesse B. Hawley, assignor to Arvey Manufacturing Company. (Cl. 92-56.) June 12, 1928.

1,673,081. Mailing tubes. Horace Z. Landon, Newton, Mass. (Cl. 229-93.) June 12, 1928.

1,673,089. Method of pulping wood. Francis G. Rawling, Knoxville, Tenn. (Cl. 92-9.) June 12, 1928. (Chips are submerged in and heated with an aqueous solution of a normal sulphite and a salt of a weakly ionized polybasic acid from 100 to 125 degrees C., removing the chemical treating liquor and then heating to a higher temperature.)

1,673,128. Wall board lath. Joseph Strand, Los Angeles, Calif. (Cl. 72-124.) June 12, 1928.

1,673,265. Art and apparatus for debarking pulp slabs. Redmond H. Pangborn, Tacoma, Wash. (Cl. 144-208.) June 12, 1928.

1,672,931. Machine for manufacturing pulp products. William J. de Reamer, assignor to Mapes Consolidated Manufacturing Company, Griffith, Ind. (Cl. 92-56.)3 June 12, 1928.

1,673,902. Feeding mechanism for box-making machines. Orph W. Cowgill, assignor to St. Louis Label Works, St. Louis, Mo. (Cl. 271-44.) June 19, 1928.

1,673,944. Plaster board. August F. H. Kohler and Alexander S. Speer, assignors to United States Gypsum Company, Chicago, Ill. (Cl. 154-45.9.) June 19, 1928.

1,673,967. Hair felt and method of making. Albert L. Clapp, assignor to Beckwith Manufacturing Company, Boston, Mass. (Cl. 92-1.) June 19, 1928.

1,673,975. Folding box. Herman A. Feigelman, Paterson, N. J. (Cl. 206-44.) June 19, 1928.

1,674,231. Pulp-refining machine. Larkin A. Thomas, Atlanta, Ga. (Cl. 92-27.) June 19, 1928.

1,674,349. Drier for sheet material. Arthur J. Vance, Painesville, O. (Cl. 34-31.) June 19, 1928.

1,674,462. Paper-folding machine. Lester Kyle Aldrich, Sidney, O. (Cl. 270-68.) June 19, 1928.

1,674,580. Apparatus for breaking the dried coating on sheet material. Adolph C. Van Sluys, assignor to Nashua Gummed and Coated Paper Company, Nashua, N. H. (Cl. 91-18.) June 19, 1928.

1,674,611. Stencil sheet. Herbert L. Shallcross, assignor to The Shallcross Company, Philadelphia, Pa. (Cl. 41-38.6.) June 19, 1928.

1,674,630. Composite siding. Bernard C. Beckman, assignor to Beckman-Dawson Roofing Company. (Cl. 20-5.) June 26, 1928.

1,674,720. Automatic regulator. Walter L. Hamilton, assignor to General Electric Company. (Cl. 92-46.) June 26, 1928.

1,674,848. Method and apparatus for finishing paper. Stuart W. Webb and John G. Callan, assignors to Eastern Manufacturing Company, Boston, Mass. (Cl. 101-32.) June 26, 1928. (Moistening the comparatively dry paper and immediately subjecting it to heavy pressure between finishing surfaces.)

1,674,911. Beater-engine roll. Arthur M. McPhillips, Beloit, Wis. (Cl. 92-22.) June 26, 1928.

1,674,921. Carton making machine. George A. Robinson, assignor to Johnson Automatic Sealer Co., Ltd., Battle Creek, Mich. (Cl. 93-44.) June 26, 1928.

1,674,948. Hair felt and method of making. Albert L. Clapp, assignor to Beckwith Manufacturing Company, Boston, Mass. (Cl. 92-21.) June 26, 1928.

1,674,980. News print paper. William H. Millspaugh, assignor to The Paper and Textile Machinery Company, Sandusky, O. (Cl. 92-38.) June 26, 1928. (News print made by simultaneously forming wet sheets of half the thickness of the ordinary sheet and consolidating them as a single sheet, thereby obtaining the strengthening effect of a laminated formation.)

1,675,066. Paper coating machine. Clarence O. Thorne, Watervliet, Mich., assignor of one-half to Philip G. Baltz, Chicago, Ill.

1,675,211. Conical wood-chip distributor for chemical pulp boilers. Eino Castren and Einari Oksa, Enso, Suomi-Finland. (Cl. 92-7.) June 26, 1928.

1,675,244. Manufacture of paper, paper-board, building boards, roofing and flooring sheets and cloths, and the like. George Frederick Blombery, Lane Cove, New South Wales, Australia. (Cl. 92-21.) June 26, 1928. (Fibrous stock incorporated with a pulp jelly from kelp and containing a proportion of rubber.)

1,675,314. Paper box. Louis Rosenfield, Joseph Rosenfield and Samuel A. Beer, Brooklyn, N. Y. (Cl. 229-34.) June 26, 1928.

The Yellowing of Paper

By M. Marini [1]

White paper, whatever its composition in fiber and chemicals, is always subject in course of time to a gradual change in color by turning yellow. The change in shade is more or less accentuated by the quality of the paper. In the case of ordinary paper, the consumer rarely complains, but it is not rare to meet this inconvenience in fine quality papers used for documents, artistic prints, etc. In such cases, this defect is of importance because during manufacture it is not customary to make the necessary trials to obviate this fault, and hence the value of the paper depreciates, and what is worse the mill producing the paper suffers commercially. The causes of this alteration in color with time are varied in nature and depend on the oxidation of certain substances contained naturally or accidentally in the paper. The factors involved in the oxidation are light, heat, and air. Light in particular is the most harmful agent, followed by heat. Air by itself exerts a much weaker action.

Amongst the most common causes are:—

(a) The presence of lignones in the pulp.

(b) The presence in the paper of iron salts, which in the ferrous state are almost colorless but are susceptible to oxidation into more stable and colored ferric salts.

(c) The presence of rosin.

Other materials used in the manufacture of paper such as the loading matter, starch, gelatine, do not generally give rise to the defect.

(d) Aniline dyes, on the contrary, and sometimes ultramarine, do favor a yellowing of the paper.

(e) Rag fiber and more particularly bleached cellulose when the encrusting substances have not completely been got rid of or when they have undergone a too vigorous oxidizing action by hypochlorites or acids or again when they have been badly washed after bleaching can be the seat of a development of yellowing.

This cause of yellowing, due exclusively to the presence of oxycellulose in the fiber, is more particularly met with in the textile industry in products manufactured from linen, cotton and hemp than from artificial silk.

The yellowing is progressive and is proportional to the content of oxycellulose, estimated by the copper number. In many cases the phenomenon is not apparent until after many months in storage.

[1] Royal Textile and Paper Experimental Station, Milan, Italy.

Pressure of Ground Wood

It is well known that all papers containing mechanical wood turn yellow very readily with time and in proportion to the content of mechanical wood. The lignones are non-saturated organic substances containing aldehyde groups and consequently very apt to react with various chemical reagents. Thus in presence of actinic rays and the oxygen of the atmosphere they are very easily oxidized, the oxidation being accompanied by the appearance of a brownish color. The degree of bleaching of wet mechanical pulp freshly made varies appreciably according to the species from which it has been made. It is recognized that for mechanical pulp of first quality, the resinous woods are those which give the least whiteness, while amongst the leafy trees, the aspen and Canadian poplar give whiter pulps than the ordinary poplar. The fir gives a white pulp than the pine, and in a pulp of a given origin the whiteness varies with many factors such as the season of cutting, maturity, etc. Wood of recent cut is very liable to give a pulp which turns yellow. If felling has been carried out during the period of growing or if the wood has not been allowed to season, the phenomenon of a temporary reddening is often noticed before a definite yellowing appears.

The mill water has a great influence on the color of mechanical pulp. Iron, as has been already stated, promotes yellowing. Since it exists in all papers, even in those called chemically pure, to be detrimental to a paper the content of iron must exceed limits variable with each paper.

All underground waters contain iron in varying amounts, which exists in two forms, as slightly soluble ferrous bicarbonate (0.1 grains of iron per litre maximum) and as the salt of humic acids.

Ferruginous water, due to its content of bicarbonate, rapidly becomes opalescent on exposure to air, depositing ochre, this action being accelerated and increased by heat. Bicarbonate of iron cannot exist in the free state but only in the form of a colorless aqueous solution which on decomposing gives insoluble gelatinous ferric hydroxide of a yellowish brown color. Many methods have been tried to get rid of the iron in water, based generally on pumping in compressed air or simply by aeration in trickling through porous material. The Permutit process, if it were not so costly, would certainly have much to recommend it owing to its simplicity. When water is contaminated with soluble iron in organic combination, its purification is more difficult owing to the

stability of the colloidal complex substances formed. Water has often an obnoxious odor of bad eggs (sulphuretted hydrogen), an indication of organic fermentation.

Presence of Iron

Water for paper mills manufacturing fine quality paper should not contain more than 0.1 milligrams of iron per liter either in the mineral form or in organic combination.

Vegetable fibers absorb iron contained in water and fix it if in colloidal suspension as ferric hydroxide. Moreover, residues of greasy and resinous substances are always found in the fibers, with which, being acidic in nature, iron easily combines to form iron soaps. The compounds of iron in the ferrous state are colorless or almost so in paper, but in presence of light and air are oxidized to stable brown ferric compounds. Milk of rosin gives also iron resinate which remains almost entirely fixed on the fiber like aluminium resinate. In the manufacture of mechanical pulp, the use of ferruginous water has a fatal influence on the color. In this case, it is the tannic substances present in the wood, and more especially in resinous woods, which react. The tannins in wood form with iron salts grayish green iron tannates which are acted upon by air. Considerable variation in color is often noticed in mechanical pulp produced by different mills using the same wood and having identical methods of manufacture.

The darkest pulp always comes from that mill using the most ferruginous water. In sulphite cellulose mills iron can be tolerated in much wider limits than in mills making high-class paper. It can arise from the limestone used or from the pyrites carried off by the sulphur dioxide gas. It is met with in the washings in the form of ferrous bisulphite and ferrous sulphate which easily oxidizes in air; the pulp will be therefore colored with insoluble iron salts which react with the tannins present.

The components of iron can not only color the pulp by their presence in the mill water but also by occurring in the alum used for sizing the paper. The best qualities of alum are generally almost free from iron (0.002 per cent—0.005 per cent). A content of 0.1 per cent of iron in alum is detrimental to the color of the paper.

The coloration of iron may also be produced in the process of refining in cylinders with steel blades, the iron contaminating the pulp in the form of minute particles of iron oxide.

In examining a paper for the content of iron, a preliminary trial should be made in comparison with other papers of known iron content. The following is a very simple method:—The samples of paper under consideration are moistened with water, cut into strips, dipped quickly into a cold bath of dilute 10 per cent nitric acid, left a few minutes in the air, and then dipped into a bath containing 2 per cent potassium ferrocyanide. This salt in presence of soluble iron compounds gives, as is well known, an intense blue insoluble compound (Prussian Blue). From the intensity of coloration of paper previously tested, an indication of the iron content of the paper under examination can readily be obtained. If, on the other hand, the amount of iron present in the paper in organic combination is desired, the following method is used:—

Boil several grams of paper with a 10 per cent alcoholic potassium hydroxide solution under a reflux condenser, filter, evaporate off the alcohol, take up the residue with dilute nitric acid, filter again in order to separate the insoluble rosin, and the solution treated with potassium or ammonium thiocyanate and ether, the iron thiocyanate coloring the ether red and from the intensity of the coloration the amount of iron can be determined colorimetrically.

Effect of Rosin

Rosin is a raw material which should always be taken into consideration in cases of yellowing in papers free from mechanical wood and containing normal quantities of iron. Rosin is a non-saturated organic compound which in the very finely divided state spontaneously oxidizes into oxyacids more highly colored and more easily soluble in alkaline solutions. It is well known that of two papers of the same composition the sized paper containing rosin is more colored than the unsized paper, and that the intensity of the ivory color is proportional to the content of rosin remaining in the paper.

Alumina, which for the most part exists in paper in the form of hydroxide, acts in the sizing of paper as a protective colloid of the free rosin, and prevents under normal sizing conditions, the above-mentioned auto-oxidation of rosin.

Rosin, like other organic substances such as bitumens and resins, is sensitive to light, which promotes the superficial oxidation of rosin even if the latter is protected by aluminium hydroxide. The quality of the rosin, its origin and content of oxyacids have also an influence on the phenomenon of yellowing. Dr. Schoeller, of Düren, has patented a process for obtaining a non-yellowing paper; he uses for sizing rosin which has been previously treated with hypochlorite of lime.

For some years a quality of American rosin has appeared on the market, reddish in appearance and having a characteristic odor of pitch pine. This is extracted by special solvents from the trunks of trees and the roots of various species of conifers. This rosin colors paper yellow during manufacture.

The problem of research into the susceptibility of paper to yellowing is not yet absolutely solved since the chemical reactions which take place are very complex, inasmuch as the causes which produce this phenomenon can be of diverse nature.—*Le Papier* (December, 1927).

Extraction Turbines

R. S. Macdonald, Sec'y. of TAPPI.

Sir: I was interested to read the contribution, "Extraction Turbine Installation at Tyrone" by R. G. Heyl. During the last five or six years, quite a number of factories in Scotland and England have installed extraction reciprocating engines of the bleeder type, which are said to be even more economical than the extraction turbine.

They are usually tandem engines, the process steam being extracted between the high pressure and low pressure cylinders. The mill in which I was employed has a 2500 hp. extraction engine. When it took over the total load from a 1000 hp. uniflow engine and a 500 hp. compound engine it was possible to discontinue the use of two Lancashire boilers.

The process steam is extracted at 15 pounds per square inch but can be varied a few pounds and the engine under full load will give out 30,000 pounds process steam per hour. The high pressure cylinder takes the bulk of the load and all unused process steam is utilized in the low pressure cylinder and then goes to the condenser.

The process steam is used in the esparto grass boiler plant, soda recovery plant, beating engines, paper machines and coating department, where before, as at Tyrone, reduced live steam was used.

I should like to know if there are any extraction reciprocating engines of the aforementioned type in the United States or Canada.

Charles Edward

Anyone wishing to supply this information may address Mr. Edward care of R. S. Macdonald, Sec'y. TAPPI, 18 East 41th Street, New York, N. Y.

Millers Falls Paper Company Joins TAPPI

The most recent addition to the rapidly growing group of Corporate Members of the Technical Association is the Millers Falls Paper Company of Millers Falls, Mass. This company has long been a recognized leader in the manufacture of the highest grade bonds, ledgers and writings. The famous Old Deerfield Bond is a product of this company. The representative of the company in the Technical Association is John L. Bagg, treasurer.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

Auditors Responsibility for Balance Sheet Values*

By Prof. L. R. Dicksee, M. Com., F.C.A.

The sad state of many a company's finances in recent years has led to auditors being blamed for many things by people who do not realize their real position and functions. The accounts of a company are not the accounts of the auditors but of the directors, and while the auditors may criticize them, they cannot alter them. Prof. Dicksee makes some suggestions as to the way in which the law might be strengthened in the direction of protecting shareholders.

My subject this evening is "An Auditor's Responsibility for Balance Sheet Values." I think we must all agree that this is a subject upon which it ought to be possible to say something, because when we find that companies in the course of a single year admit in their published accounts losses running into, say, £8,000,000 or £12,000,000, it is certainly disquieting, and one cannot help feeling that losses of that kind can hardly be made as a mere result of ordinary trading operations, and that there must be something in the values attached to the balance sheets of the different periods to explain so very large a discrepancy.

Let us start by pulling our title to pieces and considering each part of it separately. First of all, what is an auditor? We need, I think, deal this evening only with auditors of companies. We know, I think, that the basic idea in having an auditor of the accounts of a company is that owing to the large number of shareholders in even comparatively small companies, it would be quite impracticable to give to each individual shareholder the right which every partner naturally possesses of making his own investigation of the accounts of the undertaking whenever he wants to do so. Thus we get the idea of an auditor, acting as agent for all the shareholders in making such examination of the accounts as may be thought necessary on behalf of them all. In the early days the auditor or auditors were, I think, invariably shareholders, and the practice of appointing auditors who are shareholders has not entirely died out up to the present time.

What Responsibility Means

Let us ask ourselves what we mean by "responsibility." That word, I think does not necessarily mean anything quite so strong as saying that an auditor is absolutely liable. The word "liable" is a little stronger, I think, than the word "responsible." To be responsible does not mean much more than to be answerable for or open to be called to account if the need arises, whereas the word "liable" is a very strong word indeed; it implies being bound, and goes back to the times when debtors who were unable to pay were liable to be bound and sold into slavery. In modern conditions debtors are dealt with in a different way, and sometimes it is highly profitable to go through two or three bankruptcies, but the original idea was that a liability was taken very seriously indeed.

Now, as to a balance sheet, perhaps half the trouble in connection with our subject arises out of the fact that not everyone has the same opinion as to what a balance sheet is or ought to be. We who are versed in accounts know, of course, that a balance sheet is a summary of the balances appearing in a ledger after the Profit and Loss Account had been closed, and that, if the Profit and Loss Account has been properly prepared, it follows that the items which come into the balance sheet are items which are properly excluded from the Profit and Loss Account, because if they are credit balances, they are not profits, and if they are debit balances, they are not outlays properly and fairly chargeable against the operations of the current period.

It does not follow as a matter of course from that that everything which goes into the balance sheet is either a debt capable of being extracted from the company by legal process immediately, or, on the other hand, an asset capable of being turned into money to an amount equal to the figure appearing against it. A balance sheet, we at least know, is not precisely the same thing as a statement of affairs which would be placed before the creditors in an insolvency, but many persons certainly seem to think that a balance sheet ought to be a precise statement of assets and liabilities based upon realizable values, and I think that a great deal of the criticism which has been directed against balance sheets has arisen out of that misunderstanding.

Value Represents Worth

Lastly, as regards our title, we come to the word "value." Now, that word merely represents "worth" or "strength." It has not necessarily a meaning absolutely tied up with money, or something capable of being expressed in terms of money. If a thing is of value it must be of worth, and it implies the idea of strength. That is quite all right from the point of view of balance sheet values. The possessions or resources of a company are, of course, the measure of its strength, but there is a difference be-

* A lecture delivered before the Metropolitan Certified Accountants Students' Society, March 9, 1927. Accountants' Journal.

tween a concern being strong in the purely static sense of possessing property, and "going strong" in the dynamic sense of being possessed of a valuable and profitable undertaking.

There are many different ways in which values may be computed. One method is to base them on cost price, on the assumption that at least it was a measure of value at the time when they were acquired, and that, perhaps, nothing has happened since of a sufficiently definite character to provide us with any better basis for a revaluation, which, of course, may or may not be true, according to the circumstances. An alternative basis of valuation is the estimated cost at the present time of replacing the article in question. It would differ from the original price to the extent to which prices had varied in the meantime, and also to the extent to which the condition and general utility of the article in question had been affected by the lapse of time.

Another basis of valuation would be the price at which the article in question could be sold, and another would be the price at which we should be willing to sell it, which is not necessarily the same thing. If we are very anxious to realize, we may be content to accept a lower price than that which we might be able to obtain if we were in no particular hurry. Finally, there is, as a possible basis of value, the actual prices at which such things are being currently sold, a basis which is valuable, of course, only upon the assumption that there are considerable quantities of precisely similar things which are being readily dealt in and for which, therefore, we have, in fact, a current market price.

Cannot Be Ascertained With Precision

These different bases of values are not by any means all capable of being ascertained with precision, and some of them, as you will not have failed to notice, are based upon what it would cost to acquire such an article, while others are based on what one might expect if one were a seller instead of a purchaser. There would always necessarily be a difference between the buying and the selling price, that difference being the basis of trading profits. Apart, however, from any question of how we are going to value the individual assets comprised in a balance sheet, we need to remember that in the case of a business which is going on and which there is every reason to suppose will continue to go on, the value of the assets as they stand is not necessarily the same thing as the value of such assets if the business was being discontinued and sold piecemeal. Whatever basis we may select for our valuation, there will be a difference between an undertaking as a going concern and the individual possessions of that undertaking sold at breakup prices. Clearly, so long as there is no reason to suppose that the business of an undertaking is going to be discontinued, then the going-concern value, if we could arrive at it, is much more interesting for our purpose than a hypothetical breakup value. We might put it in a rather different way, and it is sometimes convenient to do so. If we have before us the balance sheet of any ordinary concern, and if we are going to accept the valuations placed upon the various assets, we may say that the company itself is possessed of wealth equal to the total of those assets, subject to the payment of its proper debt—what it owes to outside creditors—and we may call that new figure the aggregate free assets of the undertaking. That is what it has, or what presumably it would have, after providing for the payment of its just debts, and that is the measure of the property of the shareholders.

Theoretically, the aggregate amount of free assets ought to come to the same thing as the aggregate market value of the shares of the company. If it does not, there must be a discrepancy between the valuation placed upon the assets in the balance sheet, and the valuation placed upon the shares by those whose opinions have determined the current market price of the shares. It does not necessarily follow, of course, that the balance sheet is wrong and the market price is right. It is just as likely that the reverse is the case, or that both are wrong. We should, in practice, invariably find a fairly wide discrepancy between the two. That discrepancy is often so wide that although we know that market prices are not always right and that they vary from day to day and even from hour to hour far more violently than the actual position of the company can possibly be varying, yet if we find a permanent discrepancy between the two, it does suggest that a balance sheet is of little, if any use to those who wish to derive from it some information as to the value of the shares. After all, that is one of the uses to which balance sheets are commonly put, whether it be reasonable or unreasonable, that they should be employed for that purpose.

Fluctuation in Price of Shares

There is another aspect of that, which it is well for us to consider. I referred just now to fluctuations in the market price of shares of companies, which obviously cannot be explained by alterations in the general condition and prospects of those companies as measured in terms of accounts. They can sometimes be assigned to a definite cause, such as the death or retirement of a director, which might have a very adverse effect upon the price of the shares. It is not easy to see how we can make any accounting entries to correspond with that in the books of the concern, but at the same time we should be forced to state that something had happened which altered the value of the undertaking as a whole. It looks, therefore, as if we should have to admit a paradox—that the value of an undertaking as a whole is not necessarily the same thing as the aggregate value of its different parts, in spite of the mathematical axiom that it is.

Now, let us pass on to consider the assets of companies a little more in detail. You are all, of course, familiar with the broad distinction between fixed assets and floating assets, so I need not stop to labor that point beyond reminding you, perhaps, that it is not possible for anyone to make two lists of articles and say that list A contained always fixed assets, while those in list B are always floating assets. It is not a matter of classifying the articles themselves, but of inquiring for what purpose they are held by a particular concern. If they are intended to be retained in their existing form and used as equipment to facilitate the earning of profits, then, of course, they are fixed assets. Use is the essential thing that we have to look for. That suggests that we have to discriminate between a thing being used and a thing being used up. Most things in the process of being used tend to become used up, and therefore, in any just valuation we have to take into account the fact that they are in process of being used up, and that we do in the ordinary way by the process which we call "providing for depreciation."

Spreading Over a Series of Years

I think you will agree with me that, if our accounts are prepared as they should be, the object of providing for depreciation is not primarily to revise balance-sheet values with a view to restating them according to current prices (whether buying prices or selling prices), but it is is rather a method of spreading over a series of years, each of which has had or will have the use of the articles in question, that loss which will ultimately be found to have resulted from the marked difference between what it will be possible to sell the fixed assets for when discarded as no longer useful and what it cost us to acquire them in the first instance. The whole of the difference between the original cost and the ultimate scrap value is part of the working expenses of the period during which they are in use, and the aim of providing for depreciation, even though it may not always be achieved, is to spread this loss properly and equitably over the whole series of years.

That we have to make the calculation in advance makes it, of course, always liable to error, but, if the calculations be made carefully by competent persons—by which I mean persons competent to be trusted with the buying of those articles in the first instance—they should know sufficient about them and about their enduring qualities to be able on the average to form a very fairly reliable estimate in advance of the length of time during which they will be useful. Otherwise it would have been impossible for

them to form any opinion as to whether they were worth buying at that price or not. It is one thing, of course, to say that directors and managers of companies ought to be able to estimate provision for depreciation in advance with some approach to accuracy, and it would be another thing altogether for the law to make them liable for any mistake in their estimate, and that, I think without doubt is the reason why the law (as represented by legal decisions from time to time) has been so very chary of laying down any dictum compelling even an honest attempt to be made to provide for depreciation where directors have thought fit not to make such a provision. But we must not lose sight of the fact in our criticism of balance sheets as commonly prepared that, if and when they do make provision for depreciation they are doing something more than the law compels, and, therefore, if it be done imperfectly, that is apparently only what the law anticipated would be likely to happen.

Written Down Value

If we make our provision for depreciation upon the usual business methods of aiming at spreading the ultimate loss equitably over a series of years, it must, of course, inevitably follow that that portion of the original cost which we carry forward from year to year—the "written-down value" as it has often been called—will be a figure entirely different from any figure which we might expect to arrive at arising out of a revaluation of the assets, considering them merely from the point of view of their present values as distinct from spreading the depreciation loss.

So far as I can see there is no reason by which it is possible to spread the depreciation charge equitably over a series of years so as to arrive at a reasonable statement of profit year by year and at the same time produce a balance sheet which will give a revaluation of assets year by year based on current values, even supposing that we thought we would like to have a balance sheet on those lines. On the question of the possibility of a revaluation of assets from time to time, according to their then actual value, as distinct from a written-down value arrived at by some process of calculating provision for depreciation, it would be necessary to take into account not merely the deterioration in value arising from depreciation, but also alterations in prices of such articles from time to time. Those alterations might be upwards or downwards, or upwards as regards some items and downwards as regards others. For instance, during the war you will remember that current prices of anything in the nature of machinery tended to soar upwards. If we were to revalue plant and machinery to give effect to those new prices, and if we allowed for depreciation arising from wear and tear, we should probably have been able to show a profit for at all events a couple of years on the possession of equipment in the form of plant and machinery. Again, at all times there is a tendency for business premises to increase in value to an extent which very often more than covers any deterioration in the fabric of the building arising from wear and tear.

Any attempt at revaluation could hardly ignore price fluctuations, and, if that valuation were to be brought into the Profit and Loss Account, the Profit and Loss Account would no longer afford us any reliable index to the actual results of what we might call the legitimate business operations of the concern. We should therefore, be losing one of the main things which it should be the function of the accounts to show.

Floating Assets

Floating assets, on the other hand, I suppose everybody admits, must be revalued for balance sheet purposes, but the revaluation there is not always carried out in its entirety, particularly if the result of a revaluation would be to write up the book figure, as it might if the prices of certain commodities, which are being dealt in, had risen appreciably or, in the case of investments, if there had been a general rise in prices as compared with those existing at the date of the previous balance sheet. We usually find, therefore, that the revaluation of floating assets is limited—and, I think we are all agreed, properly limited—to taking account of any decline in value, while deliberately ignoring any increase in value. That more or less brings us to a state of affairs such as we normally find in the balance sheet of every really prosperous concern—that the true position of affairs is not represented by the assets stated in the balance sheet, and the true position is more favorable than the position shown upon paper, because there have been improvements in value which have been deliberately excluded.

Now let us turn to another aspect of the matter—the extent to which we are able to form any idea of the real value of the possessions of the company by looking at its balance sheet. It is clear that those possessions or assets must be stated in such a way that we really can get an intelligible idea of the position from reading the balance sheet. In this country a balance sheet is never published which is a complete list of all ledger balances; it is always in summarized form, but while it is the invariable rule and while it is, I think we shall agree, perfectly legitimate to summarize the items in the balance sheet, those items must at least be stated in sufficient detail in order to enable us to get the desired general impression from the balance sheet itself.

The different kinds of assets must be properly grouped so that different kinds of things are shown separately. Not only that, but before the impression which we obtain from the balance sheet can give us any clear idea at all it is necessary that somehow we should have the means of knowing on what basis the figures stated against those items have been arrived at. It will not necessarily be the same basis in all cases, even apart from the broad difference between the bases of valuing fixed assets and floating assets. Not all fixed assets will necessarily be valued in the same way, and perhaps not all floating assets either. There should be no uncertainty as to the basis and, if we are going to avoid uncertainty, it means that in some cases at least it is necessary to state by whom the valuation has been made.

Business Premises, Less Depreciation

Certainly, a very much more definite impression would often be obtained if that information were forthcoming. It is sometimes forthcoming, but much more frequently it is not. For instance, an item in the balance sheet, "Business premises, less depreciation," so much, informs us that something has been deducted to cover depreciation, and that is all. It does not even tell us who arrived at the amount to be deducted for depreciation, except by inference, the inference being that, as the balance sheet is signed by the directors, they are responsible for the way in which it is prepared. If, on the other hand, we were told that the amount of depreciation had been assessed by so-and-so, we should at least know that those figures were backed by the opinion of that individual, and, if we were able to form any idea of the value of his opinion, we should be nearer a clear idea of the use of the information which we had obtained.

Alternatively, if we have a note added to the effect that the business premises have been revalued by Messrs. So-and-So, a well-known firm of valuers, who now value the premises at so much, even although it may be an entirely different figure from the effective one in the balance sheet, the information becomes very much more definite in consequence. Similarly, with regard to the valuation of stock-in-trade, if those responsible for the valuation had their names disclosed,—if not on the face of the balance-sheet, in the directors' report—they would, I feel sure, in the vast majority of cases, feel their responsibility more acutely than if they knew that they were going to remain anonymous. The source of the basis on which the valuation is made can hardly ever fail to add to the use of the valuation itself.

We in this room all know that when anything goes wrong in connection with the finances of a company it is the fashion to blame the auditors for everything. The auditor is always responsible for the due performance of his duties, but he is not responsible for everything, and he is certainly not responsible for the skill or want of skill with which the affairs of the company are managed. We want to remember—and we want, I think, as much publicity as possible given to the fact—that the accounts of

a company are not prepared by the company's auditors and that the auditors have no power to alter those accounts other than by bringing influence to bear upon the board to induce them to modify something which the auditors think ought to be modified or might be modified to the general advantage.

Critic of the Accounts

The auditor is simply a critic of the accounts as stated by the directors, and the accounts are the accounts of the directors, who are the parties liable to account to the shareholders. An auditor is not an insurer or a valuer. He does not guarantee the results of a company. He does not even guarantee that there is no error in the accounts put forward by the directors, even though he has reported upon them. It is no part of his duty to value assets. Indeed, in the majority of cases he would not be competent to make a valuation any more than anyone else concerned; neither has he the means of getting at the sources of information necessary to enable a proper valuation to be made.

For what it is worth again, we want to remember that the auditor is the agent of the company and not the agent of each separate shareholder. The duty that he as agent owes to his principal is therefore a duty to the company rather than to the individual shareholders. That being so, there must obviously be a limit to the extent to which he can be expected to go out of his way to disclose to the individual shareholders a weakness which is the weakness of the company, his principal. He must, of course, perform the duties that he has undertaken to perform by the acceptance of fees, but he must be careful not to exceed those duties out of an excess of zeal.

Although the auditor has no special duty to individual shareholders, and still less to members of the public who are not shareholders, but may be thinking of becoming shareholders, he has, of course, a very important duty to perform to the company in reporting upon the balance sheet as presented to him, and it is, I think, quite worthy of serious consideration whether the Legislature, in providing what we may call a statutory form of formal report for an auditor to make to the shareholders, has not done something rather to encourage a perfunctory view of the auditor's real responsibility. When we have got a statutory form, that form, of course, must be used unless we are able to give full chapter and verse for departing from it. If the position were more elastic and the auditor left to select his own form of words, we should, I feel sure, in most cases, get better and more really useful reports from the auditors to the shareholders of companies. But whatever we may say under that heading, I want to suggest to you the possibility that, apart altogether from an auditor's position in connection with the issuing of company balance sheets, there are other bodies that might do something towards strengthening the shareholder's position and making him less helpless in the hands of a board of directors.

Four Points Which Might Be Altered

There are four points, I think, for instance, in regard to which the Legislature might help. Speaking generally, I am no advocate of parliamentary intervention in business affairs, but there are four points which might be altered, and I think that the alteration in each case would be entirely beneficial. First of all, I think that the very common practice of directors, when issuing accounts to the shareholders, of enclosing a stamped form of proxy in favor of some of their own number should be forbidden by law. While that practice is permitted, it is almost inconceivable that a board should fail to obtain a majority of the voting power even though they might be quite unworthy of the trust. From such inquiries as I have made among shareholders who are not business people—and we have to remember that the vast majority of shareholders of most companies are not business people—I find that there is a very widespread impression that this stamped form, which they are asked to sign and get witnessed, is a receipt for the dividend which they are going to get after the meeting is held. They do not read it, and do not realize that it is a proxy form at all. If directors want proxies, I do not see why they should not tout for them at their own expense as other people have to do.

My next point is, that I do not think that companies should be allowed to frame a provision in the articles of association as a result of which the holders of certain classes of shares are deprived of all voting power. That means for all practical purposes that they have the disadvantages of being shareholders and none of the safeguards. It is difficult to see what useful purpose is served, except that it makes it wholly unnecessary for the directors to trouble about securing a majority of votes save in those limited classes of shares which are not subject to this restriction.

In the third place, I think that when a company goes into compulsory liquidation—and I think we shall all agree that no company ever does go into compulsory liquidation unless there is something radically wrong with it—every director of that company should submit to a public examination somewhat analogous to a public examination in bankruptcy, and, until he has obtained the Registrar's certificate that he has passed that examination, it should not be competent for him to sit as a director on the board of any other company.

The Most Contentious Point

Fourthly—and this is perhaps the most contentious of the four points—I want to suggest to you that at all events in a very large number of cases—probably in the great majority of cases—no real difficulty would be experienced in prescribing a statutory form of published accounts that would be a very great improvement upon the vast majority of published accounts that one gets under present conditions. Statutory forms of accounts are at the present time provided for only a very limited number of different kinds of undertakings—railways, gas companies, electric light, and so on—but the idea is certainly capable of being expanded. By the provision of, say half a dozen different statutory forms of account, I think it would be possible to provide something suitable to almost any conceivable kind of company.

Then, again, I think that both the Stock Exchange and banks might do a little to protect the unsuspicious public from many of the wildcat schemes that are inflicted upon them. Speaking generally, I think that professional accountants do not allow their names to appear on the prospectus of a new company unless they are satisfied as to its respectability and as to its having some reasonable prospect of success, but it is not so difficult to get the names of brokers or bankers upon the prospectus of a doubtful company, and there is less excuse for them, because brokers and bankers always insist upon a fee, whereas auditors commonly do not. If they are going to be paid a fee, for that fee they ought to be able to make adequate inquiries. They will, of course, be mistaken in some cases and misled in others, but I think something more might be done than is done at present. In the same way I think that the conditions under which the Stock Exchange allow dealings to take place in the shares of a company might be tightened up with advantage.

Open to Individual Accountants

As suggestions coming in under a somewhat different heading, and which perhaps are less contentious, I should like to suggest to you that, without any kind of legislation, and without attempting to induce any kind of public body to take action, it is open to individual accountants as and when the opportunity arises to suggest to individual boards of directors that in the long run they might with considerable advantage to their companies do one or all of three things: First of all, in all cases, publish something in the nature of a Revenue Account or a Trading and Profit and Loss Account—something which shows, however, inadequately, how the profit has been arrived at, instead of merely giving us the bare figure and leaving us to guess as to its source. Many companies, of course, do publish Profit and Loss Accounts, but the majority of Profit and Loss Accounts published are far too meagre

to serve any very useful purpose. There is a stock argument against that—that the publication of such figures will give information to competitors. It is very difficult to see what information that would be of any use to competitors can be given from any kind of Profit and Loss Account that one would suggest should be published.

Secondly, I think that many companies might with advantage follow a practice of issuing accounts more frequently than once a year. In some cases the expense of so doing might be prohibitive, but in many cases quarterly accounts are actually prepared for the use of the directors, and when that is the case, it is not very easy to see why the rank and file of the shareholders should not have the advantage of the same information.

An Insistent Public Demand

Thirdly, if it be thought desirable to meet in some way what is undoubtedly a rather insistent public demand, even if it is not a very well informed demand, for balance sheets that are really statements of affairs—revaluations of assets from time to time—that might, I think, best be met by the publication, not necessary every year, but, say, every five years, of something in the nature of a valuation report like that which life assurance companies provide, quite independently of the annual balance sheet and not necessarily in any way linked up with it, but a quinquennial statement which would aim at showing the true position at the then current values as far as is reasonably practicable. It would not be impossible to prepare a valuation balance sheet of that kind, and it would certainly go a long way towards meeting this criticism which is so frequently levelled against balance sheets that the values placed in them are illusory, because they are not current realizable values.

In the long run, of course, the welfare of the investing public does not depend—perhaps it is fortunate—upon any act of parliament or similar regulation. It depends in the main—I think we shall all agree—upon the honesty and capacity of individual professional men who may be employed to audit the accounts of different companies. Where the selection has been wisely made the results will be as satisfactory as any kind of regulation or exactment could make them, even although auditors suffer, as they do, under the disability of having only limited powers to deal with the position.

M. D. Larkin Co. to Expand

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, July 30, 1928.—Plans for a general expansion of the M. D. Larkin Company, manufacturers of mill supplies and machinery, 115-121 East Third street, and 125 East Second street, are nearing completion. First actual step toward the expansion was taken by officials of the company when they applied to the secretary of state at Columbus for authority to increase the capital stock by 45,000 shares.

The increase will bring the common no par value shares of the local concern up to a total of 60,000. The company also has in existence preferred stock valued at $600,000. Maurice D. Larkin is president of the local concern, while John P. Martin is vice president and Carl F. Woessner is secretary and manager.

Ball Bros.' Plant Damaged by Storm

[FROM OUR REGULAR CORRESPONDENT]

NOBLESVILLE, Ind., July 24, 1928.—Damage to the paper box factory of Ball Brothers at Noblesville which was struck by a heavy storm recently has been estimated at about $30,000 by insurance adjusters. As a result of walls being blown down and roofs torn off of half the buildings, the plant is not now in operation and several hundred men are out of employment. It perhaps will be another week before any departments of the plant can operate and H. G. Funsitt, manager of the Ball Brothers plant, stated it will require most of the summer to complete all the repairs necessary.

Simplification of Lift Trucks and Skids*

At the request of a number of manufacturers, the Division of Simplified Practice has made a study of the use of lift trucks and skids with a view to surveying the possibilities of the application of simplified schedule in their manufacture. At present, skid platforms, commonly known as "skids," are made in a great variety of sizes and shapes, having been developed in most cases to meet the needs of individual industries. While the necessity for special sizes and forms may always exist, a brief survey discloses that a wide range of commodities may be loaded on platforms of the same width and height. Accordingly, the Division of Simplified Practice is arranging a conference of truck and skid manufacturers, and of railroad companies and other users, for the purpose of formulating a tentative program for simplification in the varieties of lift trucks and skids. Among important considerations will be cost of manufacture and conformity to needs of users and convenience of railroads and other carriers. In considering dimensions for skid platforms, one factor will be economical packing in freight cars. One railroad company has adopted a skid of such dimensions that 24 can be loaded into a standard 50-foot box car, leaving room opposite the doors for the lift truck to enter.

Commodities now handled on skid platforms include flour, sugar, coffee, cement, rubber, leather, castings, iron and steel bars, plates and sheets, machines and numerous machine parts, paper and pulp, chemicals in containers, food products, railway stores and supplies, textiles, brick, glass and a multitude of manufactured products in boxes and other containers. In the case of certain commodities, such as flat paper stock, shipments of goods on skids has been known to save over 75 per cent in packing and boxing materials, and over 90 per cent in labor cost of loading and unloading railroad cars. Such savings were made possible because both shipper and consignee employed interchangeable skid and truck equipment. One paper company now loads a freight car with flat paper stock on skids in 45 minutes, using two men, where formerly it took three hours, using seven men, to load the same quantity of goods packed in boxes which in themselves cost three times as much as the skids per carload of goods. The same saving is of course possible for the unloading operation. In many industrial plants the finished product comes from the final machine or process onto a skid platform. If it has to be unloaded from that platform, rehandled, and loaded into a car, and the process reversed at the other end of the haul, practically all of the labor and material so used represents waste. Suggestive of the wide application which a standardization of skid and lift truck equipment might find is the estimate that approximately 9,000,000 skids are now in use in this country. One railroad company alone expects to use about 100,000 skids and more than 3,000 lift trucks for handling and storing supplies.

* U. S. Department of Commerce Bulletin.

J. F. Auer Heads Luzerne Paper Corp.

[FROM OUR REGULAR CORRESPONDENT]

HADLEY, N. Y., July 23, 1928.—The new officers of the Luzerne Paper Corporation are as follows: J. F. Auer, President; P. H. Moran, Vice President; W. H. Redlien, Secretary and Treasurer.

The increase of capital of the Luzerne Paper Corporation is simply a matter of exchanging the original stock into common and preferred.

The only financing done by the mill was the issuance of $100,000 in bonds and $50,000 preferred stock. The mill has no other bonded indebtedness.

The company has a water power contract for 50 years; this is carried on its books for a nominal value of $1.00.

The J. F. Auer Paper and Board Corporation, 475 5th avenue, New York City, are the sole distributors.

The production recently has been increased approximately 33 1/3 per cent and the mill is operating continually.

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JULY 28, 1928

SUMMARY

Cigarette paper	46 cs.
Wall paper	23 bls., 8 cs.
Paper hangings	20 bls., 8 cs.
Hanging paper	2 cs.
News print	6,670 rolls
Sulphate paper	431 rolls
Printing paper	137 bls., 66 rolls, 141 cs.
Packing paper	52 bls., 27 cs.
Wrapping paper	73 cs.
Stencil paper and ink	66 cs.
Filter paper	66 cs.
Drawing paper	13 cs.
Colored paper	4 bls., 41 cs.
Tissue paper	12 cs.
Photo paper	5 cs.
Surface coated paper	74 cs.
Metal paper	1 cs.
Coated paper	24 cs.
Baryta coated paper	156 cs.
Basic paper	20 cs.
Fancy paper	17 cs.
Decalcomania paper	102 cs.
Transfer paper	5 cs.
Cover paper	6 cs.
Writing paper	19 cs.
Envelopes	31 cs.
Straw board	631 rolls
Miscellaneous paper	439 cs.

CIGARETTE PAPER

P. J. Schweitzer, Pr. Van Buren, Marseilles, 46 cs.

WALL PAPER

W. H. S. Lloyd & Co., Franconia, Liverpool, 13 bls., 3 cs.
F. J. Emmerich, Hamburg, Hamburg, 2 bls., 2 cs.
S. Stern Stiner, Inc., Hamburg, Hamburg, 3 bls.
Globe Shipping Co., Hamburg, Hamburg, 5 bls., 3 cs.

PAPER HANGINGS

A. C. Dodman, Jr., Inc., Franconia, Liverpool, 3 bls.
W. H. S. Lloyd & Co., Minnetonka, London, 17 bls., 6 cs.
Whiting & Patterson Co., Inc., Homeric, Southampton, 2 cs.

HANGING PAPER

A. L. Diament & Co., De Grasse, Havre, 2 cs.

PAINTED PAPER

F. Sperrle, De Grasse, Havre, 1 cs.

NEWS PRINT

Parsons & Whittemore, Inc., Hamburg, Hamburg, 645 rolls.
Clinton Paper Co., Cornerbrook, Cornerbrook, 539 rolls.
Brooklyn Times, Cornerbrook, Cornerbrook, 1,060 rolls.
N. Y. Telegram, Cornerbrook, Cornerbrook, 1,916 rolls.
Courier News, Cornerbrook, Cornerbrook, 39 rolls.
Brooklyn News, Cornerbrook, Cornerbrook, 1,579 rolls.
Parsons & Whittemore, Inc., American, Bremen, 892 rolls.

SULPHATE PAPER

Insight Paper Co., Bergensfjord, Oslo, 431 rolls.

PRINTING PAPER

E. Dietzgen & Co., N. Amsterdam, Rotterdam, 46 cs.
P. C. Zuhlke, N. Amsterdam, Rotterdam, 60 cs.
C. Steiner, N. Amsterdam, Rotterdam, 4 cs.
Heemsoth Basse & Co., Hamburg, Hamburg, 1 cs.
Perkins Goodwin & Co., Hamburg, Hamburg, 4 cs.
National City Bank, Hamburg, Hamburg, 137 bls.
Keuffel & Esser Co., Hamburg, Hamburg, 66 rolls, 1 cs.
Kupfer Bros., Yorck, Bremen, 3 cs.
Judson Freight F'd'g Co., Yorck, Bremen, 25 cs.

PACKING PAPER

Hensel Bruckman & Lorbacher, N. Amsterdam, Rotterdam, 2 cs.
J. P. Heffernan Paper Co., Hamburg, Hamburg, 52 bls.
Atlantic F'd'g Co., Hamburg, Hamburg, 19 cs.
Haule Wax Paper Manfg. Co., Hamburg, Hamburg, 6 cs.

WRAPPING PAPER

E. Dietzgen & Co., N. Amsterdam, Rotterdam, 8 cs.
E. Dietzgen & Co., Hamburg, Hamburg, 12 cs.
British American Tobacco Co., Hamburg, Hamburg, 8 cs.
The Eleto Co., Yorck, Bremen, 2 cs.
Baldwin Universal Co., Yorck, Bremen, 19 cs.
Keller Dorian Paper Co., Pr. Van Buren, Marseilles, 16 cs.
S. Gilbert, America, Bremen, 2 cs.

STENCIL PAPER & INK

Arlac Dry Stencil Co., Hamburg, Hamburg, 66 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 10 cs.
E. Fougera & Co., Homeric, Southampton, 56 cs.

DRAWING PAPER

Keuffel & Esser Co., Hamburg, Hamburg, 11 cs.
Keuffel & Esser Co., Port Victor, London, 2 cs.

COLORED PAPER

S. Gilbert, Yorck, Bremen, 26 cs.
P. H. Petry & Co., Yorck, Bremen, 4 bls.
S. Gilbert, America, Bremen, 15 cs.

TISSUE PAPER

F. B. Vandegrift & Co., Franconia, Liverpool, 6 cs.
Meadows Wye & Co., Franconia, Liverpool, 4 cs.
G. W. Sheldon & Co., Minnetonka, London, 2 cs.

PHOTO PAPER

J. J. Gavin, Franconia, Liverpool, 5 cs.

SURFACE COATED PAPER

P. C. Zuhlke, N. Amsterdam, Rotterdam, 34 cs.
Gevaert Co. of America, Rotterdam, Rotterdam, 40 cs.

METAL PAPER

Hensel Bruckman & Lorbacher, Hamburg, Hamburg, 1 cs.

COATED PAPER

Globe Shipping Co., Hamburg, Hamburg, 24 cs.

BARYTA COATED PAPER

J. H. Schroeder Banking Corp., Yorck, Bremen, 49 cs.
Globe Shipping Co., Yorck, Bremen, 39 cs.
Globe Shipping Co., Pr. Harding, Bremen, 68 cs.

BASIC PAPER

American Express Co., West Eldara, Antwerp, 20 cs.

GALLIC PAPER

Keuffel & Esser Co., Port Victor, London, 1 cs.

FANCY PAPER

Globe Shipping Co., Rotterdam, Rotterdam, 17 cs.

DECALCOMANIA PAPER

L. A. Consmiller, Hamburg, Hamburg, 14 cs.
C. W. Sellers, Hamburg, Hamburg, 20 cs.
C. W. Sellers, Yorck, Bremen, 5 cs.
C. W. Sellers, America, Bremen, 6 cs.
C. W. Sellers, Pr. Harding, Bremen, 4 cs.
L. A. Consmiller, Pr. Harding, Bremen, 16 cs.
B. F. Drakenfeld & Co., Cedric, Liverpool, 37 cs. (duplex).

TRANSFER PAPER

F. L. Kramer & Co., Yorck, Bremen, 5 cs.

COVER PAPER

International F'd'g Co., Hamburg, Hamburg, 6 cs.

WRITING PAPER

J. Beckhard, N. Amsterdam, Rotterdam, 3 cs.
Freedman & Slater, Hamburg, Hamburg, 7 cs.
The Eleto Co., Hamburg, Hamburg, 4 cs.
B. Altman & Co., Homeric, Southampton, 2 cs.
Globe Shipping Co., De Grasse, Havre, 2 cs.
Stern Bros., De Grasse, Havre, 1 cs.

ENVELOPES

H. Reeve Angel & Co., Inc., Minnetonka, London, 4 cs.
Globe Shipping Co., Yorck, Bremen, 27 cs.

STRAW BOARD

A. Vuyk, N. Amsterdam, Rotterdam, 191 rolls.
State Bank & Trust Co., N. Amsterdam, Rotterdam, 137 rolls.
State Bank & Trust Co., Rotterdam, Rotterdam, 139 rolls.
A. Vuyk, Rotterdam, Rotterdam, 164 rolls.

MISCELLANEOUS PAPER

Standard Products Corp., De Grasse, Havre, 57 cs.
Japan Paper Co., De Grasse, Havre, 12 cs.
Keller Dorian Paper Co., De Grasse, Havre, 22 cs.
National Paper & Type Co., N. Amsterdam, Rotterdam, 20 cs.
Steiner Paper Corp., N. Amsterdam, Rotterdam, 21 cs.
P. C. Zuhlke, N. Amsterdam, Rotterdam, 13 cs.
P. H. Petry & Co., N. Amsterdam, Rotterdam, 7 cs.
Globe Shipping Co., N. Amsterdam, Rotterdam, 22 cs.
Steffens Jones Co., N. Amsterdam, Rotterdam, 18 cs.
Coenca Morrison Co., Hamburg, Hamburg, 3 cs.
L. Schulman Co., Hamburg, Hamburg, 19 cs.
Judson Freight F'd'g Co., Hamburg, Hamburg, 3 cs.
Globe Shipping Co., Hamburg, Hamburg, 87 cs.
National Paper & Type Co., Rotterdam, Rotterdam, 20 cs.
Globe Shipping Co., Rotterdam, Rotterdam, 11 cs.
International F'd'g Co., Rotterdam, Rotterdam, 78 cs.
E. Dietzgen & Co., Rotterdam, Rotterdam, 26 cs.

RAGS, BAGGINGS, ETC.

National City Bank, Savoia, Messina, 325 bls. rags.
Banco Com'l Italiana Trust Co., Savoia, Naples, 149 bls. rags.
J. Cohen & Sons, Cameronia, Glasgow, 8 bls. paper stock.
Castle & Overton, Inc., Cameronia, Glasgow, 43 bls. waste paper.
Arrowhead Mills, Hektor, Barcelona, 180 bls. rags; 125 bls. jute waste.
G. W. Millar & Co., Hektor, Barcelona, 117 bls. rags.
A. H. Searle, Inc., Eastside, Cardiff, 583 bls. rags; 160 bls. bagging.
G. W. Millar & Co., Saco, Antwerp, 180 bls. bagging.
A. W. Fenton, Inc., Saco, Antwerp, 249 bls. rags.
Chemical National Bank, N. Amsterdam, Rotterdam, 207 bls. rags; 73 bls. bagging.
J. Rosenberg, N. Amsterdam, Rotterdam, 226 bls. rags.
Darmstadt Scott & Courtney, N. Amsterdam, Rotterdam, 98 bls. cuttings.
Castle & Overton, Inc., Caucasier, Antwerp, 333 bls. rags.
Castle & Overton, Inc., N. Y. City, Bristol, 66 bls. rags.
C. B. Richard & Co., N. Y. City, Bristol, 306 bls. rags.
C. R. Spence, N. Y. City, Bristol, 521 bls. rags.
Interstate Trust Co., Karnak, Alexandria, 358 bls. rags.
Phila. National Bank, Karnak, Alevandria, 136 bls. rags.
E. J. Keller Co., Inc., Karnak, ——, 400 bls. rags.
E. J. Keller Co., Inc., Hamburg, ——, 16 bls. rags.
Bank of The United States, Hamburg, Hamburg, 53 bls. rags.
State Bank & Trust Co., Hamburg, Hamburg, 38 bls. rags.
Gallagher & Ascher, American Merchant, London, 11 bls. rags.
Brown Bros. & Co., American Merchant, London, 73 bls. rags.
Madison State Bank, Alicante, Barcelona, 107 bls. rags.
Guaranty Trust Co., Sinsinawa, Genoa, 34 bls. rags.
Union Bank & Trust Co., Sinsinawa, Barcelona, 142 bls. rags.
Chase National Bank, Sinsinawa, Valencia, 195 bls. rags.
E. J. Keller Co., Inc., Italy Maru, ——, 103 bls. rags.
E. Butterworth & Co., Inc., Kerhonkson, Manchester, 189 bls. bagging.
Castle & Overton, Inc., Kerhonkson, Manchester, 195 bls. bagging.
Leigh Textile Co., Kerhonkson, Manchester, 122 bls. cotton waste.
Standard Bank of South Africa, Kerhonkson, Manchester, 69 bls. cotton waste.
C. B. Richard & Co., Giulia, Bari, 266 bls. rags
Banco Com'l Italiane Trust Co., Giulia, Bari, 30 bls. rags.
Guaranty Trust Co., Giulia, Bari, 247 bls. rags.
C. B. Richard & Co., Giulia, Trieste, 98 bls. bagging; 61 bls. rags.
American Exchange Irving Trust Co., Giulia, Venice, 29 bls. rags.
Phila. National Bank, Giulia, Venice, 166 bls. rags.
Castle & Overton, Inc., Giulia, Venice, 201 bls. rags.
Dominion Bank, Yorck, Bremen, 25 bls. rags.

(*Continued on page 68*)

BROUGHTON SYSTEMS

Guarantee

Decrease in steam consumption at least 10%

Decrease in operating pressure at least 30%

Increase in drying capacity at least 10%

—Regardless of present system or scheme

HEALY-RUFF COMPANY
ST. PAUL, MINN.

Diamond Alkalies Please The Most Critical Buyer—

—for the reason that the most critical standards of quality are constantly maintained in the manufacture of Diamond Alkalies from raw materials to finished product.

If you are particularly exacting in the selection of your alkalies try Diamond Brand Alkalies—they always please the most critical buyer.

Diamond Alkalies Include
58% Soda Ash 76% Caustic Soda
Bicarbonate of Soda
Laundry Soda
Cleaner and Cleanser
Special Alkali

ALKALI

Diamond Alkali Company

Pittsburgh, Pa., *and Everywhere*

Imports of Paper and Paper Stock

(*Continued from page 66*)

C. B. Richard & Co., Yorck, Bremen, 199 bls. rags.
Chemical National Bank, Yorck, Bremen, 117 bls. rags.
E. Butterworth & Co., Inc., Cedric, Liverpool, 82 bls. bagging.
Bank of The Manhattan Co., Cedric, Liverpool, 99 bls. bagging.
B. D. Kaplan, Cedric, Liverpool, 98 bls. rags.
Chemical National Bank, America, Bremen, 59 bls. rags.
A. H. Searle, Inc., Port Victor, London, 82 bls. bagging.
J. B. Moors & Co., Port Victor, London, 139 bls. rags.
Castle & Overton, Inc., West Eldara, Antwerp, 94 bls. rags; 64 bls. bagging.
Overton & Co., Rotterdam, Rotterdam, 121 bls. bagging.
Standard Bank of South Africa, Rotterdam, Rotterdam, 66 bls. cotton waste.
Banco Com'l Italiana Trust Co., Rigel, Genoa, 204 bls. bagging.
Banco, Com'l Italiana Trust Co., Rigel, Leghorn, 57 bls. rags.
Guaranty Trust Co., Rigel, Leghorn, 39 bls. rags.
Equitable Trust Co., Rigel, Leghorn, 10 bls. rags.
American Exchange Irving Trust Co., Rigel, Marseilles, 95 bls. rags.
Green Hamilton & Co., Rigel, Marseilles, 46 bls. cotton waste.
Castle & Overton, Inc., Hamburg, Hamburg, 4 cs. wires.
Castle & Overton, Thuringia, Hamburg, 1 cs. wires.

OLD ROPE

Brown Bros. & Co., N. Amsterdam, Rotterdam, 58 coils.
National City Bank, N. Amsterdam, Rotterdam, 47 coils.
Union Bank & Trust Co., N. Amsterdam, Rotterdam, 32 bls.
A. Bloch, N. Amsterdam, Rotterdam, 56 coils.
Brown Bros. & Co., N. Y. City, Bristol, 129 coils.

CASEIN

T. M. Duche & Sons, Corsican Prince, B. Aires, 417 bags, 25,020 kilos.
Equitable Trust Co., De Grasse, Havre, 286 bags.

WOOD PULP

E. J. Keller Co., Inc., N. Amsterdam, ——, 900 bls. wood pulp.
E. J. Keller Co., Inc., Rotterdam, ——, 300 bls. wood pulp.
Thavenot S. S. Co., Cresco, St. Albans, 930 cords wood pulp.
Castle & Overton, Inc., Hamburg, Hamburg, 187 bls. wood pulp, 28 tons.
J. Andersen & Co., Giulia, Trieste, 2,460 bls. wood pulp.
Atterbury Bros., Inc., Bergensfjord, Oslo, 500 bls. wood pulp.
Bank of N. Y. & Trust Co., Bergensfjord, Oslo, 300 bls. sulphite pulp.
Bulkley Dunton & Co., Robin Gray, ——, 1,500 bls. wood pulp.

WOOD FLOUR

A. Kramer & Co., N. Amsterdam, Rotterdam, 500 bags.
State Chemical Co., Rotterdam, Rotterdam, 820 bags.

PHILADELPHIA IMPORTS.

WEEK ENDING JULY 28, 1928

1st National Bank of Boston, Savoia, Genoa, 238 coils old rope.
E. A. Stone & Co., Hektor, Barcelona, 25 bls. rags.
Union Bank & Trust Co., Hektor, Barcelona, 465 bls. rags.
Castle & Overton, Inc., Saco, Antwerp, 48 bls. rags.
True & McClelland, Saco, Antwerp, 27 bls. rags.
J. A. Steer & Co., N. Y. City, Bristol, 61 coils
Chase National Bank, Nobles, Valencia, 195 bls. rags.
J. A. Steel & Co., N. Y. City, Bristol, 61 coils old rope.
Union Bank & Trust Co., N. Y. City, Bristol, 66 coils old rope.
Bank of The Manhattan Co., N. Y. City, Bristol, 215 bls. rags.
S. Birkenstein & Sons, Sinsinawa, Genoa, 228 coils old rope.
Castle & Overton, Inc., Sinsinawa, Barcelona, 270 bls. rags.
Castle & Overton, Inc., Sinsinawa, Valencia, 270 bls. rags.
Philadelphia Bulletin, Cornerbrook, Cornerbrook, 4,472 rolls news print.
Equitable Trust Co., Rexmore, London, 94 bls. waste paper.
Union Bank & Trust Co., Rexmore, London, 282 bls. rags.
Bank of The Manhattan Co., Rexmore, London, 137 bls. waste paper; 155 bls. rags.
J. Lang Paper Co., Rexmore, London, 136 bls. paper stock.
Castle & Overton, Inc., City of Alton, Rotterdam, 265 bls. rags.
Castle & Overton, Inc., West Harcuvar, Germany, 88 bls. rags.
Castle & Overton, Inc., Beemsterdyk, Holland, 172 bls. rags.
Castle & Overton, Inc., Boston City, England, 254 bls. rags.
Castle & Overton, Inc., Harburg, Germany, 2,860 bls. wood pulp.
E. J. Keller Co., Inc., Ontario, ——, 21 bls. rags.

BALTIMORE IMPORTS.

WEEK ENDING JULY 28, 1928

National City Bank, Sinsinawa, Genoa, 271 bls. rags.
Guaranty Trust Co., Sinsinawa, Genoa, 180 bls. rags.
S. Shapira & Sons, West Eldara, Antwerp, 69 bls. rags.
Congoleum Nairn Co., West Eldara, Antwerp, 219 bls. bagging; 1,367 bls. rags.
Castle & Overton, Inc., Harburg, Germany, 3,806 bls. wood pulp.
E. J. Keller Co., Inc., Blydendyk, ——, 300 bls. wood pulp.
Bulkley Dunton & Co., Robin Gray, ——, 1,000 bls. wood pulp.
Bulkley Dunton & Co., Hagen, ——, 125 bls. wood pulp.
Bulkley Dunton & Co., Malmen, ——, 750 bls. wood pulp.
Bulkley Dunton & Co., Westerwald, ——, 3,250 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING JULY 28, 1928

Dixie Jute Bagging Corp., Kerhonkson, Manchester, 70 bls. bagging.
Darmstadt Scott & Courtney, West Eldara, Antwerp, 47 bls. bagging.
New York Trust Co., West Eldara, Antwerp, 169 bls. bagging.
British American Trust Co., West Eldara, Antwerp, 56 cs. printed cigarette wrappers.
E. J. Keller Co., Inc., Doschdyk, ——, 50 bls. rags.

PORTLAND IMPORTS

WEEK ENDING JULY 28, 1928

Bulkley Dunton & Co., Chattanooga City, ——, 1,975 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING JULY 28, 1928

G. W. Millar & Co., Inc., Saco, Antwerp, 96 bls. rags.
G. M. Graves Co., Karnak, Alexandria, 65 bls. rags.
Tradesmans National Bank, Corsican Prince, B. Aires, 417 bags casein, 25,020 kilos.
Kalbfleisch Corp., Corsican Prince, B. Aires, 2,501 bags casein, 150,060 kilos.
1st National Bank of Boston, Corsican Prince, B. Aires, 584 bags casein, 25,040 kilos.
Castle & Overton, Inc., Anaconda, Holland, 85 bls. rags.
Bulkley Dunton & Co., Seattle Spirit, ——, 752 bls. wood pulp.
Bulkley Dunton & Co., Wanja, ——, 625 bls. wood pulp.
Bulkley Dunton & Co., Modemi, ——, 750 bls. wood pulp.

SOREL, CANADA, IMPORTS

WEEK ENDING JULY 28, 1928

Bulkley Dunton & Co., Foldenfjord, ——, 3,250 bls. wood pulp.

Gets Statistics on Cigarette Paper and Tubes

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 1, 1928.—Franklin H. Smith, chief of the paper and lumber section of the Tariff Commission, has returned from a trip during which he gathered some statistics on the manufacture of both cigarette paper and textile tubes.

The domestic survey of textile tubes has been completed for the preliminary study for the Commission but no report has yet been made. All of the domestic field work that is to be done in connection with cigarette paper has also been completed. This survey is being made at the request of the French government, as stated in PAPER TRADE JOURNAL some time ago.

No amplification of the demands of the French government as to either onionskin or parchment paper has yet been received by the Commission and therefore no work at all has been done on that survey to date.

Building Bag Mill at Vancouver

PORTLAND, Ore., July 27, 1928.—The Austin Company has now started construction work on the buildings which will house the new bag factory to be operated in conjunction with the Columbia River Paper Mills at Vancouver, Wash. As previously reported, these buildings will include a warehouse, and with all units will embrace 50,000 square feet of floor space, costing, exclusive of machinery, $75,000.

Associated Mills To Meet Sept. 24-25

HOLYOKE, Mass., July 15, 1928.—The Associate Mills, Crocker-McElwain Company, and Chemical Paper Manufacturing Company, of Holyoke, Mass., have just made announcement relative to the holding of the Sixth Annual Mill and Merchant Conference which will be held at Holyoke on Monday and Tuesday, September 24 and 25. Later announcement will be made giving complete details.

GDC

The

G D C POLICY

Quality FIRST

FOR THE COLORING OF BOND PAPERS

If you are confronted with two-sidedness we especially recommend

FAST BOND YELLOW N T G G
FAST BOND ORANGE N T G R
FAST BOND SCARLET N T R R
FAST BOND GREEN N T G G
FAST BOND BLUE N T G B
FAST BOND BLUE N T B B

EXCELLENT FASTNESS TO LIGHT

NEKAL B EXTRA

An ideal wetting-out and softening agent for new and old press felts. An effective cleaning agent in place of sulphuric acid. Strictly neutral.

230 Fifth Avenue, New York, N. Y.

BOSTON, MASS. 159 High Street
CHICAGO, ILL. 305 W. Randolph St.
CHARLOTTE, N. C. 220 West 1st Street
PHILADELPHIA, PA. 111 Arch Street
PROVIDENCE, R. I. 40 Fountain Street
SAN FRANCISCO, CAL. 38 Natoma Street

Also Sole Agents for

GRASSELLI DYESTUFF CORPORATION
Albany, N. Y. and Grasselli, N. J.

GENERAL DYESTUFF CORPORATION

ORR FELTS for Longer, Better and Most Economical SERVICE

Nine Days Longer Wear

FELT bills represent one of the major every day expenses of paper mill operation. Consequently any felt that will last several days longer than the general run of felts becomes a money saving factor of prime importance.

On several recent tests Orr felts averaged 9 days longer service than the felts with which they were competing on the tests.

Figure that out over a year's run. It doesn't take an expert to see what such a saving can mean to a mill.

Not only do Orr felts last longer, due to their better construction, they are also capable of extracting the water faster than other felts regardless of travel speed.

To convince yourself get an Orr and make your own test.

The Orr Felt & Blanket Co.
Piqua, Ohio

ORR FELTS

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, August 1, 1928.

Although trading in the local paper market was mostly along routine lines during the past week, the amount of business transacted was fairly satisfactory for the time of the year, and a cheerful sentiment prevails throughout the industry. Prices are generally holding to schedule and reports of concessions are infrequent.

The news print market is in a rather spotty condition mainly due to over-production. Consumption is being maintained in good volume, however, and contract shipments are moving at a steady pace. Spot offerings are ample and consumers are having no difficulty in filling their immediate requirements. Prices are holding to former levels but quotations for the forthcoming year are lower.

While the paper board market is only moderately active, prices rule steady and unchanged. The fine paper market is exhibiting a strong undertone, while tissues are in fair request for the season. The coarse paper market is also in a sound position. Summer specialties are in brisk demand, and wrapping paper is still moving in excellent volume.

Mechanical Pulp

Conditions in the ground wood market are about normal for the time of the year. Both imported and domestic grades are only in light demand for future requirements, but contract withdrawals are well up to average. Prices are being maintained at the levels which have been maintained for some considerable time.

Chemical Pulp

Business in the chemical pulp market is showing signs of improvement. Both imported and domestic grades are well booked ahead and some good sized contracts have already been arranged for the forthcoming year. Supplies of the most popular grades are scarce and quotations rule steady to firm. Many observers anticipate an active market in the fall of the year.

Old Rope and Bagging

Domestic and imported old manila rope are in improved request from the paper mills. Recently advanced prices are being maintained without difficulty. The trend of the bagging market is fairly satisfactory. Mill demand for roofing grades is excellent. Gunny scrap and burlap are moderately active. Prices are generally unaltered.

Rags

Although the domestic rag market is rather quiet, there is considerable mill interest in the roofing grades. Demand for cotton cuttings is rather light at present. The foreign rag market remains dull, prices abroad still ruling high. Some improvement was noticed in the demand for mixed rags. Prices of the different grades of rags are practically unaltered.

Waste Paper

No radical changes were recorded in the paper stock market. New business is rather scarce, although a fair amount of interest is being evinced by the paper mills in the lower grades. No. 1 mixed paper continues fairly active and old kraft machine compressed bales are in steady request. Book and ledger stock, and soft white shavings, are lifeless at present.

Twine

The twine market continues the even tenor of its way. Although business is quiet at present, due to seasonal conditions, the industry is in a sound position and a general revival of activities is confidently anticipated after the close of the holiday period. Quotations are holding up to previously recorded levels and there is not much talk of concessions around.

Canadian Pulp and Paper Exports Decrease

Canadian exports of pulp and paper in June were valued at $15,502,067, according to the report issued by the Canadian Pulp and Paper Association. This was a decrease of $1,425,354 from the previous month.

Exports of wood pulp in June were valued at $3,939,810 and exports of paper at $11,562,257 as compared with $3,808,825 and $13,118,596, respectively, in May.

Quantities and values for the various grades of pulp and paper were as follows:

	June, 1928		June, 1927	
PULP:	Tons	$	Tons	$
Mechanical	16,424	424,376	33,054	1,040,587
Sulphite Bleached	22,322	1,716,096	25,701	1,949,662
Sulphite Unbleached	18,333	938,659	19,141	1,021,691
Sulphate	12,984	770,381	15,961	945,537
Screenings	3,396	69,298	2,004	37,030
	73,459	3,939,810	95,861	4,994,507
PAPER:				
News Print	174,031	11,130,679	159,495	10,442,651
Wrapping	925	103,141	1,344	154,743
Book (cwts.)	5,493	45,558	16,472	103,355
Writing (cwts.)	.....	.....	1,070	8,406
All other	.....	282,879	.....	351,020
		11,562,257		11,060,175

For the first six months of the current year the total value of Canadian exports of wood pulp and paper amounted to $94,104,081 as compared with a total of $85,009,814 in the first six months of 1927, an increase for this year of $9,094,267.

Wood pulp exports for the six months were valued at $22,339,880 and exports of paper at $71,764,201 as compared with $22,707,157 and $62,302,657, respectively, in the first half of 1927.

Details for the first half year are as follows:

	Six months, 1928		Six months, 1927	
PULP:	Tons	$	Tons	$
Mechanical	86,921	2,349,043	109,933	3,235,578
Sulphite Bleached	123,863	9,337,226	118,811	9,279,844
Sulphite Unbleached	108,677	5,509,849	94,633	5,185,989
Sulphate	81,610	4,837,811	81,386	4,926,437
Screenings	15,200	305,951	3,949	79,309
	416,371	22,339,880	408,712	22,707,157
PAPER:				
News Print	1,065,380	68,704,892	900,899	59,034,180
Wrapping	8,030	878,881	8,004	910,804
Book (cwts.)	31,336	256,908	46,940	332,683
Writing (cwts.)	1,724	16,637	7,963	65,806
All other	.....	1,906,883	.....	1,959,184
		71,764,201		62,302,657

Pulpwood exports for the first six months were smaller than in the first half of 1927, the total being 744,974 cords valued at $6,926,030 as compared with 837,876 cords valued at $8,087,173 in the first six months of 1927.

The

ST. REGIS PAPER COMPANY

Daily Capacity 525 TONS

Newsprint
Catalog and Directory Papers
Fibre Wrapping Papers
Packers Oiled Manila
Specialties

General Sales Office

15 Broad St., New York

Farmers' Bank Bldg.
Pittsburgh, Pa.

RHOADS TANNATE WATERSHED LEATHER BELTING

On a Cross-Belt Cone Drive Four and a Half Years

ON the above drive rubber and camel hair belts *lasted from five to twenty months.*

After the Rhoads Tannate Watershed Belt, shown in the picture had been on *four years and one month* the management ordered another Tannate Belt for the drive because the belt was showing wear.

The new belt lay in their stock room for nearly six months before it got a chance to replace the old one, which was then cut into narrower widths and used on other drives.

The long life, slight stretch and unusual grip of this Tannate Belt so thoroughly "sold" this company on Tannate that they now have more than fifty Rhoads Tannate Watershed belts in their plant.

You, who have not tried Tannate can hardly grasp what it means in less outlay and more output to have Belts like Tannate that last four and a half years instead of twenty months or less. A trial belt on a hard drive will soon help you to know what it really means.

Tannate is always sold under the Rhoads Service Guarantee.

J. E. RHOADS & SONS

PHILADELPHIA .....37 North Sixth Street
NEW YORK .....104 Beekman Street
CHICAGO .....24 N. Clinton Street
ATLANTA .....70 Forsyth Street, S. W.
CLEVELAND .....1224 W. Ninth Street
Factory and Tannery: Wilmington, Del.

Bristol's Recording Instruments

Level, Humidity, Speed, Electric Units, etc.

For Pressure, Vacuum, Temperature, Liquid

The Bristol Company Waterbury, Connecticut

BRISTOL'S RECORDING INSTRUMENTS

GENERAL Aluminum Sulphate CHEMICAL

GENERAL CHEMICAL COMPANY 40 RECTOR STREET, NEW YORK

The John W. Higman Co.

29 Broadway New York City

BEST GRADES OF

English China Clays

for

COATING AND FILLING

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, August 1, 1928.

BLANC FIXE.—Steadiness prevails in the blanc fixe market and both the pulp and the powder are in excellent demand for the season. Prices remain unaltered. The pulp is quoted at $40 per ton, in bulk, while the powder is selling at from 3½ cents to 3⅝ cents a pound, in barrels, at works.

BLEACHING POWDER.—Trading in the bleaching powder market was moderately active during the past week. Contract withdrawals were maintained in seasonal volume. Prices continue to hold to previously quoted levels. Bleaching powder is quoted at from $2.00 to $2.35 per 100 pounds.

CASEIN.—The casein market is in a sound position. Offerings are rather limited and prices remain unchanged. Domestic casein is selling at from 16½ cents to 17¼ cents a pound, while imported casein is quoted at from 16¾ cents to 17¼ cents, all in bags, car lot quantities.

CAUSTIC SODA.—Contract shipments of caustic soda are going forward in normal volume for the season. Prices are holding to schedule. Solid caustic soda is offered at from $2.90 to $2.95 per 100 pounds. The flake and the ground are selling at from $3.30 to $3.35 per 100 pounds.

CHINA CLAY.—Most of the business transacted in the china clay market during the week was routine. Prices remain steady and unchanged. Imported china clay is quoted at from $15 to $25 per ton, ship side. Domestic paper making clay is selling at from $8 to $9 a ton, at mine.

CHLORINE.—Demand for chlorine from the paper mills is excellent for the time of the year. Prices are holding to schedule without difficulty. Chlorine is selling at 3½ cents a pound, in tanks, or multi-unit cars, at works, on contract orders. The spot quotation ranges from 3¾ cents to 4 cents.

ROSIN.—The rosin market continues to fluctuate from week to week. At the naval stores, the grades of gum rosin used in the paper mills are now quoted at from $9.75 to $9.80 per 280 pounds, ex dock, in barrels. Wood rosin is selling at from $7.50 to $8.30 per 280 pounds, at southern shipping points.

SALT CAKE.—No. radical changes were reported in the salt cake market. Contract withdrawals are well up to average for the season. Prices are holding to schedule. Salt cake is selling at from $15 to $17 a ton, in bulk, at works. Chrome salt cake is offered at from $14 to $15 a ton.

SODA ASH.—The soda ash market is practically unchanged. Supplies are moving into consumption in fair volume. Prices are holding to the levels which have been maintained for some time. Contract quotations on soda ash, in car lots, at works, per 100 pounds, are in bags, $1.32½, and in barrels, $1.55.

STARCH.—Conditions in the starch market are satisfactory for the season. Shipments against contract are moving regularly. Prices are being maintained at recently quoted levels. Special paper making starch is selling at $4.22 per 100 pounds, in bags, and at $4.39 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—The sulphate of alumina market is exhibiting a moderately active undertone. Contract withdrawals are proceeding at a good pace. Prices remain steady and unchanged. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.55 per 100 pounds.

SULPHUR.—While trading in the sulphur market was light during the week, the industry is in a sound position. Inquiries for future business are numerous and the future outlook is encouraging. Sulphur is quoted at from $18 to $19 a ton, in bulk, at mine, on contract.

TALC.—Business in the talc market is seasonal and the demand for this product from the paper mills is mostly routine. Prices are steady and unaltered. Domestic talc is selling at from $16 to $18 a ton, in bulk, at eastern mines. Imported talc is quoted at from $18 to $20 a ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
News—		
Rolls, contract	3.25	@ —
Rolls, transient	3.25	@ 3.50
Sheets	3.65	@ 3.85
Side Runs	3.00	@ 3.75
Book, Cased—		
S. & S. C.	6.35	@ 7.75
M. F.	6.25	@ 7.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .85
Kraft	.90	@ 1.00
Manila	.75	@ .85
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	4.25	@ 4.50
Southern	4.00	@ 4.25
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

Boards—per ton—		
News	47.50	@50.00
Straw	52.50	@55.00
Chip	45.00	@47.50
Binders' Boards	65.00	@67.50
Sgl. Mla. Ll. Chip	51.00	@53.50
Wood Pulp	80.00	@85.00
Container	67.50	@72.50
85 test Jute Liner	57.50	@60.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	30.00	@31.25
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@29.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.65	@ 4.25
Easy Bleaching	2.70	@ 2.90
No. 1 strong unbleached	2.60	@ 2.70
Mitscherlich unbleached	2.65	@ 3.25
No. 2 strong unbleached	2.50	@ 2.60
No. 1 Kraft	2.60	@ 2.75
No. 2 Kraft	2.40	@ 2.50
Sulphate—		
Bleached	3.75	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.75
News Sulphite	2.40	@ 2.65
Mitscherlich	3.00	@ 3.70
Kraft (Domestic)	2.70	@ 3.30
Soda Bleached	3.35	@ 3.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.50	@ 1.65

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.75	@12.25
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7 25	@ 7.75
New Unbleached	10.50	@11.00
Washables	4.25	@ 4.75
Fancy	5.50	@ 6.00
Blue Overall	6.75	@ 7.25
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.25	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.95	@ 1.05

Foreign Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cottons	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.50	@ 6.25
No. 3 White Linens	4.50	@ 5.00
No. 4 White Linens	3.00	@ 3.50
Old Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.25	@ 2.50
German Blue Linens	2.50	@ 2.75
German Blue Cottons	2.00	@ 2.25
Checks and Blues	1.75	@ 1.90
Lindsay Garments	1.85	@ 1.95
Dark Cottons	1.65	@ 1.75
Old Shopperies	1.55	@ 1.65
New Shopperies	1.50	@ 1.60
French Blues	2.10	@ 2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	3.25	@ 3.50
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, heavy	1.60	@ 1.65
Bright Bagging	1.60	@ 1.65
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	3.25	@ 3.50
Domestic	3.25	@ 4.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3 25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.25	@ 3.50
Hard, White, No. 2	2.65	@ 2.85
Soft, White, No. 1	2.25	@ 2.50
Soft, White, No. 1	2.50	@ 2.65
White envelope cuttings	3.25	@ 3.50
Flat Stock—		
Stitchless	1.65	@ 1.75
Overissue Mag	1.65	@ 1.75
Solid Flat Book	1.50	@ 1.60
Crumpled No. 1	1.20	@ 1.30
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.70	@ 1.80
Manilas—		
New B. B. Chips	.65	@ .75
New Env. Cut	2.40	@ 2.60
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.75	@ .85
Container	.60	@ .70
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.75	@ 1.85
News—		
No. 1 White News	1.45	@ 1.55
Strictly Overissue	.80	@ .90
Strictly folded	.55	@ .60
No. 1 Mixed Paper	.47½	@ .50
Common Paper	.30	@ .35

SOME PAPER MILL USERS OF
Badenhausen Boilers
Superheaters :: Preheaters

Geo. F. Hardy, Consulting Engineer, New York
For Southern Paper Co., two orders, total 4700 H.P.
For St. Croix Paper Co. ..... 1200 H.P.
For Brown Paper Mill Co. ..... 3430 H.P.
Central Paper Co., Muskegon, Mich., four orders, total ..... 3100 H.P.
Philadelphia Paper Mfg. Co., Phila., three orders, total ..... 2400 H.P.
Jessup & Moore Paper Co., Phila., four orders, total ..... 4750 H.P.
Ontario Paper Co., Ltd.
For Daily Newspaper Co., North Tonawanda, N. Y. ..... 2034 H.P.
Filer Fibre Company, Filer City, Mich. ..... 1500 H.P.
John Lang Paper Co., Philadelphia, Pa..... 416 H.P.
Bayless Manufacturing Corp., Austin, Pa..... 1300 H.P.
Northern Board & Paper Co., San Francisco, Cal., two orders, total ..... 400 H.P.
Crown Willamette Paper Co., San Francisco, Cal., two orders, total ..... 750 H.P.
Delaware Hard Fibre Co., Wilmington, Del., two orders, total ..... 920 H.P.
Kieckhefer Container Co., Delair, N. J. ..... 1800 H.P.

Badenhausen Corporation

Reg. U. S. Pat. Off.
GENERAL OFFICE, 1011 CHESTNUT ST.
PHILADELPHIA, PA., U. S. A.

120 Broadway, New York — 211 Tramway Bldg., Denver
Reibold Bldg., Dayton, O. — 513 House Bldg., Pittsburgh
1019 Guardian Life Bldg., St. Paul

The Babcock & Wilcox Co.

85 LIBERTY STREET, NEW YORK
ESTABLISHED 1868

Water Tube Boilers Steam Superheaters
Economizers Air Preheaters
Chain Grate Stokers Oil Burners
Refractories
Seamless Tube and Piping

BRANCH OFFICES

ATLANTA	Candler Building
BOSTON	80 Federal Street
CHICAGO	Marquette Building
CINCINNATI	Traction Building
CLEVELAND	Guardian Building
DALLAS, TEXAS	Magnolia Building
DENVER	444 Seventeenth Street
DETROIT	Ford Building
HOUSTON, TEXAS	Electric Building
LOS ANGELES	Central Building
NEW ORLEANS	344 Camp Street
PHILADELPHIA	Packard Building
PHOENIX, ARIZ.	Heard Building
PITTSBURGH	Farmers Deposit Bank Building
PORTLAND, ORE.	Failing Building
SALT LAKE CITY	Kearns Building
SAN FRANCISCO	Sheldon Building
SEATTLE	L. C. Smith Building
HONOLULU, T. H.	Castle & Cooke Building
HAVANA, CUBA	Calle de Aguiar 104
SAN JUAN, P. R.	Recinto Sur 51

West Virginia Pulp and Paper Company

Manufacturers of
SUPERCALENDERED
and
MACHINE FINISHED BOOK
and LITHOGRAPHIC
PAPERS

Offset, Envelope, Bond, Writing, Cover and Music Paper, High Grade Coated Book, Index Bristol, Post Card, Kraft and Label Papers.

also

Bleached Spruce Sulphite and Soda, Kraft Pulp

200 Fifth Avenue New York — 732 Sherman Street Chicago
503 Market St., San Francisco, Cal.
122 East 7th St., Los Angeles, Cal.
Sixth and Chestnut Sts., Philadelphia, Pa.

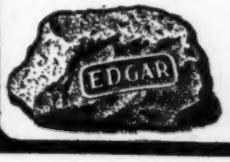
Clay

300 tons daily
AMERICAN MADE FOR AMERICAN TRADE

H. T. BRAND
COATING CLAY
and
High Grade Filler Clay

A product developed as a result of 43 years experience in washing American Clays. Today being used in many of the largest paper mills.

Ask for Samples.



The EDGAR BROS. CO.
50 Church St. New York

Twines

(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.20	@	.22
Tube Rope—			
4-ply and larger	.18	@	.19
Fine Tube Yarn—			
5-ply and larger	.23	@	.27
4-ply	.24	@	.28
3-ply	.26	@	.30
Unfinished Jute—			
Basis	.16	@	.17
Paper Makers Twine			
Balls	.13	@	.15
Box Twine, 2-3 ply	.17	@	.19
Jute Rope	.21	@	.23
Ameri. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.18	@	.20
No. 2 Basis	.16	@	.18
Sisal Lath Yarn—			
No. 1	.16	@	.18
No. 2	.14	@	.16
Manila Rope	.24	@	.26

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¼	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	.03¾	@	.04
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¼	@	.07½
Boards, per ton— (Delivered Central Territory)			
Plain Chip	37.50	@	41.00
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined— (Delivered Central Territory)			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.80	@	2.90
White Env. Cuttings	2.90	@	3.00
No. 1 Soft Shavings	2.50	@	2.60
No. 1 Mixed	1.00	@	1.05
No. 2 Mixed	.90	@	1.00
Ledger & Writings	1.55	@	1.65
Solid Books	1.25	@	1.35
Blanks	1.70	@	1.80
Krafts	1.90	@	2.00
New Kraft Cuts	2.25	@	2.35
Manila Envelope Cuttings	2.00	@	2.10
Ex. No. 1 Manila	1.55	@	1.65
Print Manila	.90	@	1.00
Folded News (oversize)	.65	@	.75
Old Newspapers—			
No. 1	.65	@	.75
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.70	@	.80
Roofing Stocks— (F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.08½	@	.09
Manila Sul., No. 1	.04½	@	.06
Manila, No. 2	.04	@	.04½
No. 2 Kraft	.05¼	@	.05½
No. 1 Kraft	.06	@	.06¼
Common Bogus	.02¾	@	—
Straw Board	50.00	@	75.00
News Board	47.50	@	—
Chip Board	42.50	@	45.00
Wood Pulp Board	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
No. 1, per ton	80.00	@	90.00
No. 2, per ton	75.00	@	80.00
Carload lots	65.00	@	75.00
Tarred Felts—			
Regular	58.00	@	63.00
Slaters (per roll)	84	@	.94
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.44	@	1.54
Best Tarred, 3-ply	1.93	@	2.08
No. 1 Mixed Paper	.65	@	.70

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.11½	@	.12
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07½	@	.08
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable	.03½	@	.04
Fancy	.05½	@	.06
Cottons—according to grades—			
Blue Overall	.07½	@	.08
New Blue	—	@	.04
New Black Soft	.05½	@	.06
New Light Seconds	.03	@	.03½
Khaki Cuttings	.04½	@	.05
Corduroy	.03	@	.03½
New Canvas	.08	@	.09½
New Black Mixed	.05	@	.05½

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.75	@	2.00
Domestic	1.75	@	2.00
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps	1.40	@	1.50
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	—	@	2.50

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.40	@	2.50
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.50	@	1.60
Writing Paper	1.50	@	1.60
No. 1 Books, heavy	1.50	@	1.60
No. 2 Books, light	1.25	@	1.40
No 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.80	@	.90
Old Kraft	2.25	@	2.50
Common Paper	.50	@	.55
No. 1 Mixed Paper	.55	@	.60
Straw Board, Chip	.60	@	.65
Binders Board, Chip	.60	@	.65
Overissue News	.75	@	.80
Old Newspaper	.50	@	.60

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	4.00
White, No. 2—			
Repacked	.02¾	@	.02¾
Miscellaneous	.01¾	@	.02
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.80	@	2.00
Black Stockings	3.75	@	4.00
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.40	@	1.50
No. 3	1.25	@	—
No. 4	1.25	@	—
No. 5A	.85	@	.90
B	.80	@	.90
C	.70	@	.80

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¼	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05¼	@	.06½
No. 2 Kraft	.04	@	.04¾
Common Bogus	.02	@	.02¾
Delivered New England points			
Straw Boards, rolls .009			52.50
Straw Board in Sheets, basis 35s to 70s			54.50 @ 55.00
Filled News Board			47.50
Chip Board			45.00
Single Manila Pulp Lined Board	52.50	@	57.50
Single White, Patent Coated Newsboard Bender	70.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.45	@	2.55
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.55	@	1.60
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.20	@	1.25
White Blank News	1.40	@	1.50
Old Kraft	2.00	@	2.10
Print Manila	.70	@	.80
No. 1 Mixed Paper	.47½	@	.52½
Overissue News	.70	@	.80
Old Newspapers	47.50	@	52.50
Box Board, Chip	.65	@	—

Bagging

(Price f. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.60
Manila Rope—			
Foreign	3.00	@	3.25
Domestic	3.25	@	3.50
Mixed Strings	.85	@	1.00
Scrap Burlaps	1.50	@	1.60
Scrap Sisal	1.25	@	—
Scrap Sisal for shredding	1.50	@	—
Wool Tares, heavy	—	@	1.50
New Burlap Cutting	—	@	2.00

Domestic Rags (New)

(Price f. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09	@	.10
Silesias, No. 1	.07	@	—
New Unbleached	.09½	@	.10
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06	@	.06½
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04	@	.04¼
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)

(Price f. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Thirds and Blues—			
Repacked	2.00	@	2.15
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.75	@	1.85
No. 2	1.25	@	1.35
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.65	@	1.70
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.00	@	5.50
New Checks & Blues	4.50	@	4.65
Old Fustians	1.90	@	—

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	14.50	@	—
No. 2 Coated and Litho	13.50	@	—
No. 3 Coated and Litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

Pulp

(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	62.00	@	—
Sulphite news grade	62.00	@	—
Sulphite, bleached	75.00	@	—
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

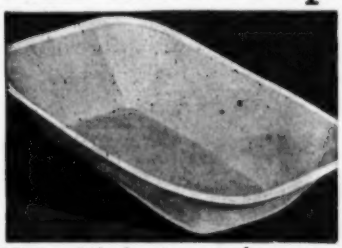
Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk, News	1.50	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.80	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.11½	@	—
Fancy Shirt Cuttings	.05½	@	—

Waterproof—Leakproof—hold their Shape



HERE is a dish that is not only waterproof and rigid as wood—but that actually sells for less than any other dish on the market. Paprus Dishes are moulded from pulp. They have no folds or staples. They are all in one piece. The most satisfactory and economical dish the dealer can buy. Write for price list.

Paprus Dishes used as covered container

PAPRUS DISHES

KEYES FIBRE COMPANY, INC.

General Sales Offices: GRAYBAR BLDG., NEW YORK

Factory: Waterville, Maine JOHN M. HART COMPANY, INC., *Manager of Sales*

Transmit 98.6% of the power

From motor, gas engine, oil engine or generator, you can transmit 98.6% of the power continuously to the driven unit with Morse Silent Chain Drives. They are flexible, absorbing sudden overloads and protecting the bearings; they provide constant speed ratios; they are ideal for short centers.

One tenth or 5,000 H. P., wherever power must be transmitted between parallel shafts, specify Morse Drives.

Write us for informative literature.

MORSE CHAIN CO., ITHACA, N.Y., U.S.A.

Atlanta, Ga.
Baltimore, Md.
Birmingham, Ala.
Boston, Mass.
Buffalo, N. Y.
Charlotte, N. C.
Chicago, Ill.
Cleveland, Ohio
Denver, Colo.
Detroit, Mich.
Louisville, Ky.
Minneapolis, Minn.
New Orleans, La.
New York, N. Y.
Omaha, Neb.
Philadelphia, Pa.
Pittsburgh, Pa.
San Francisco, Calif.
St. Louis, Mo.
Toronto, 2, Ont., Canada
Winnipeg, Man., Canada

2764

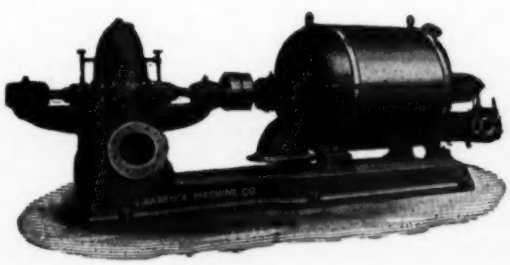
MORSE SILENT CHAIN DRIVES

Horizontally Split Casing Double Suction Pumps

LAWRENCE PUMPS

The name protects and guarantees you satisfaction.

We are the original designers and builders of the LAWRENCE PUMP.



Lawrence pumps for all conditions and services. Forty-four years of practical experience with centrifugal pump development places us among the leaders. Our efforts have been rewarded by the acceptance of our product in general.

Thousands of installations and the successful performance of our pumps should be sufficient proof of our ability to handle your pumping problems. Our engineering force is at your command.

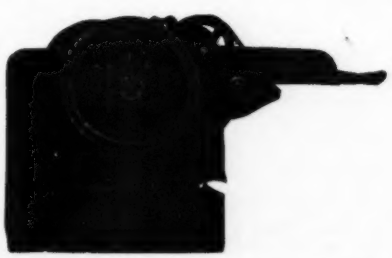
Have only Lawrence Pumps, manufactured by the

Lawrence Machine Company

361 Market St. **Lawrence, Mass.**

TAYLOR, STILES & COMPANY TRADE MARK GIANT REG. U.S. PAT. OFF. RIEGELSVILLE, N.J. U.S.A.

RAG CUTTERS



TAYLOR, STILES & COMPANY

Riegelsville, N. J., U. S. A.

Canadian Representatives

Waterous Engine Works Company, Ltd., Brantford, Ont., Can.

Sole Agents for Europe

R. J. Marx, 133-139 Finsbury Pavement, London, E. C.

Paper Mill Stocks and Bonds

Quoted by Messrs. McGay & Co., 25 Broad street, New York City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	ASKED
Abitibi Fibre Company 6s, 1947	104	105
Abitibi Power & Paper 6s, 1940	104½	106½
Abitibi Power & Paper 6s, serially to 1934	100	102
A. P. W. Pulp & Power 7s, 1945	101½	103½
American Writing Paper 6s, 1947	84	86
Bastrop Pulp & Paper 6½s, 1940	103½	105½
Beaver Board 8s, 1933	102	103
Beaver Products Corp. 7½s, 1942	109	111
Bedford Pulp & Paper 6½s, 1942	98	100
Belgo-Canadian Paper 6s, 1943	103	105
British-Columbia Pulp & Paper 6s, 1950	90	92
Brompton Paper Serial A 6s, 1946	101	103
Brompton Pulp & Paper 6s, 1935	100	...
Brown Paper Mills Serial 6s, 1941	99	101
Brown Company 5½s, 1946	99	101
Bryant Paper 6s, 1942	100	101½
Canadian Paper Board 7s, 1937	97½	99½
Cape Breton Pulp & Paper 6s, 1932	103	...
Celotex Company 6s, 1929	97	99
Celotex Company 6½s, 1939	100	102
Celotex Company of Chicago Debenture 6s, 1936	97	100
Central Paper Company Serial 6½s, 1942	86	89
Central Paper 7s, 1934	85	90
Champion Coated Paper Serial 6½s, 1934	100	...
Champion Coated Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 8s, 1930	100	...
Champion Paper Corp. 6s, 1945	95	98
Chicago Mill & Lumber Serial 5½s, 1936	98	100
Container Corp. of America Debenture 6s, 1936, ex-warrants	101	104
Continental Paper Products 6½s, 1943	92	95
Cornell Wood Products 7½s, 1937	103	...
Crown Willamette 6s, 1951	102	103½
Dells Paper & Pulp Serial 6s, 1938	95	98
Dixon Board Mills Serial 6s, 1942	60	...
Donnaconna Paper 5½s, 1948	95	98
Eastern Manufacturing Co. 7s, 1938	98	100
Escanaba Paper Serial 6s, 1939	98	100
Escanaba Paper 6½s, 1935	96	99
Filer Fibre Serial 7s, 1935	90	95
Fort Orange Paper 7s, 1942	103	...
Fort William Paper 6s, 1946	101	104
Fox River Paper 7s, 1931	100	...
Fraser Company 6s, 1950	103	105
Hammermill Paper Serial 6s, 1939	101	...
Hawley Pulp & Lumber 6s, 1946	96	...
Hawthorne Paper Company 6s, 1937	80	...
Hoberg Paper & Fibre 7s, 1937	95	97
Industrial Fibre Corp. Debenture 8s, 1933	100	...
International Paper 6s, 1955	102	104
International Paper 5s, 1947	99	100
Itasca Paper & Prairie River Paper Serial 5½s, 1938	99½	...
Itasca Paper & Prairie River Paper Serial 6s, 1938	99	...
Jessup & Moore First 6s, 1945	88	92
Kalamazoo Vegetable Parchment 6s, 1938	99	101
Lake Superior Pulp & Paper 6s, 1941	105	108
Manitoba Paper 6½s, 1936	102½	104½
Marathon Paper Mills Serial 5½s, 1942	99½	101
Marathon Paper Mills Serial 6s, 1937	100	...
Marinette & Menominee 7½s, 1936	103	105
Mead Pulp & Paper 5% Notes Serially, 1937	95	100
Mead Fibre 7s, 1937	98	101
Menosha Printing & Carton 6½s, 1939	99½	...
Midwest Box Company 6½s, 1940	100	...
Minnesota Ontario Paper Serial 6s, 1945	97½	100
Murray Bay Paper 6½s, 1947	102	105
Munissing Paper Serial 6s, 1936	98	...
Nekoosa Edwards Paper 6s, 1942	96	...
Ontario Pulp & Paper 6s, 1931	108½	110½
Orono Pulp & Paper 6s, 1943	99	...
Orono Pulp & Paper 5s, 1941	96½	...
Oswegatchie Paper Serial 6s, 1932	95	100
Oswego Falls Corp. 6s, 1941	99	102
Oxford Paper 6s, 1947	102½	...
Paepcke Paper Mills 7s, 1930	99	...
Parker-Young Company 6½s, 1944	98	100
Paterson Parchment Paper 6s, 1938	101½	103
Penobscot Chemical Fibre 6s, 1942	102	105
Port Alfred Pulp & Paper 6½s, 1943	105	107
Port Alfred Pulp & Paper 5½s, 1947	98½	100
Price Brothers 6s, 1943	105	...
Provincial Paper 5½s, 1947	98½	...
Provincial Paper 6s, 1940	100	...
Queen City Paper 7s, 1933	98½	...
Richardson & Company 6s, 1938	100	...
River Raisin Paper 6s, 1936	99	101
Riordan Pulp & Paper 6s, 1942	102	104
Rolland Paper 6s, 1937	99	101
St. Anne Paper 6½s, 1946	102	104
St. Croix Paper Serial 5s, 1937	99	...
St. Helen Pulp & Paper 6½s, 1931	99	102
St. Lawrence Paper Mills 6s, 1946	103	...
St. Lawrence Paper Mills 6½s, 1936	100½	102½
St. Maurice Valley Corp. 6s, 1945	102	104
St. Maurice Valley Corp. 5½s, 1947	98½	100½
St. Regis Paper of Canada 6s, 1931	100	101½
St. Regis Paper of Canada 6½s, 1934	100	101
Smith (Howard) Paper Mills 6s, 1934	101	...
Smith (Howard) Paper Mills 7s, 1941	104	106
Southern Paper Company 6½s, 1937	100	...
Spanish River Pulp & Paper 6s, 1931	108	110
Stevens-Thompson Paper 6s, 1942	94	96
Taggart Brothers 6s, 1944	95	100
Tait Paper & Color Industries 6s, 1935	88	92
Ticonderoga Pulp & Paper 5s, 1930	94	...
Ticonderoga Pulp & Paper 6s, 1940	100	102
Tomahawk Kraft Paper 6s, 1938	98	...
Tomahawk Pulp Paper 7s, 1932	99	...
Tonawanda Paper 5½s, Series 1941	99	102
U. S. Envelopes 5s, Series 1934	99	...
Union Bag & Paper Power 6s, 1932	98	100
United Wall Paper Factories 6s, 1947	96	99
Warren (S. D.) Company 6s, 1945	103	105
Watab Paper 6½s, 1942	101½	103½
Waterway Paper Products 6s, 1931	100½	101½
Wayagamack Pulp & Paper 6s, 1951	103	105
Westfield River Paper Serial 7s, 1943	89	93
Whitmer-Parsons Pulp & Lumber 8s, 1938	20	25
Whitaker Paper 7s, 1942	108	110

STOCKS	BID	ASKED
American Box Board, Pfd.	9¼	10¼
American Box Board, Com.	9¼	10¼
Am. Tissue Mills, 7% Pfd.	90	93
British Columbia P. & P., Pfd.	65	75
Brompton Pulp & Paper, 8% Pfd.	100	102
Brown Corp., 7% Pfd.	104	None Off
Champion Fibre, 7% Pfd	108	110
Diem & Wing, 7% Cum. Pfd.	92	97
Eastern Mfg. Co., 1st Pfd.	60	63
Great Northern Paper, Com.	75	78
Hammermill Paper, new 6% Pfd.	98	100
Hinde & Dauch, Com.	125	None Off.
Hinde & Dauch, 6% Pfd.	102	None Off.
Holyoke Card & Paper	150	None Off.
Marathon Paper Mills, Com.	125	...
Midwest Box Co., 8% Pfd.	98	102
Midwest Box Co., 6% Pfd.	95	99
Louis De Jonge Co., 7% Pfd.	94	97
Oxford Papers, Com.	115	135
Oxford Paper Co., Pfd.	108	111
Penobscot Chemical Fibre, Com.	70	80
Richardson Co., Com.	160	180
Rubberoid	101	103
Sabin Robbins Paper Co., 7% Pfd.	105	110
St. Croix Paper	155	170
St. Regis Paper Co., 7% Cum. Pfd.	105	108
Westfield River Paper Co., 1st Pfd.	Wanted	None Off
West Virginia Pulp and Paper Company	55	60
West Virginia Pulp & Paper, Pfd.	100	103
Whittaker Paper, 7% Cum. Pfd.	105	None Off

Sefton Mfg. Corp. Meets at Anderson

ANDERSON, Ind., July 30, 1928.—Fifty-two executives, plant superintendents and salesmen for the Sefton Manufacturing Corporation, who are in from Chicago, Boston, Brooklyn and other cities, recently attended the annual three day convention of salesmen at the main plant. This is the first time Anderson ever has entertained the group. John Hyde, superintendent of the Anderson factory, was chairman of the meetings.

Wesley M. Dixon, president of the corporation, headed a party of officials from that city on a special car. Another special car brought executives from the East.

The three days were spent in business meetings, plant inspections, both of the Anderson paper box plant and the corrugated paper plant at Carthage near Anderson. A golf tournament was part of the program.

Among the officials present in addition to Mr. Dixon and Mr. Hyde, were: Magnus Gaukerud, assistant sales manager; Charles H. Goodnow, sales manager; Hammond Harban, purchasing agent; Clarence O. Kennedy, vice president; Lee W. Lamboy, advertising and sales promotion manager; Earnest F. Lindewirth, auditor; Richard N. Munson, assistant sales manager; Henry Parbs, credit manager; John E. Trant, assistant sales manager; Edwin C. Wilmore, traffic manager; Harry H. Wilson, secretary-treasurer.

Officials of other Sefton plants attending were: Ira C. Keller, manager, and Carl C. Potter, chief designer of the Chicago plant; John O. VanCleaf, manager, and Harold J. Hayden, chief clerk of the Brooklyn plant; Albert E. Bentham, manager, and Earl W. Woodall of the Carthage plant. The meeting was voted the most successful in the history of the organization. All salesmen and executives gave encouraging reports of business.

Lafayette Box Board Co. Changes Stock

INDIANAPOLIS, Ind., July 30, 1928.—The Lafayette Box Board and Paper Company, of Lafayette, Ind., has filed papers with the secretary of state in Indianapolis changing the par value of stock from $500,000 common to 1,666 2/3 shares no par; increased from this number to 5,000 shares of no par common; reduction of preferred stock of $1,000,000 by exchanging it for 3,333 1/3 shares of no par common.

TRADE MARK
CAMACHINE
ROLL-WINDERS

Better Rolls—

Greater Production—

Trouble-Free Service—

A thoroughly efficient machine capable of slitting wide materials into a number of narrower widths or many narrow strips, is a valuable addition to modern factory equipment where rolls of paper or board of any kind are required in the manufacture of the articles there produced, or where material in roll form is produced for sale to others who utilize it.

May we tell you how CAMACHINES have kept pace with the needs of the paper industry, and how the right slitter and roll winder will save you money by speeding up production and cutting down waste? Just drop us a line.

CAMERON
MACHINE COMPANY
61 POPLAR STREET BROOKLYN, NEW YORK

PAPER TRADE JOURNAL
ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SEVENTH YEAR

Published Every Thursday by the
LOCKWOOD TRADE JOURNAL CO., Inc.

GEO. S. MACDONALD, President — J. K. LASSER, Secretary

Executive and Editorial Offices, 10 East 39th Street, New York
Chicago Office: 133 West Madison St

TABLE OF CONTENTS

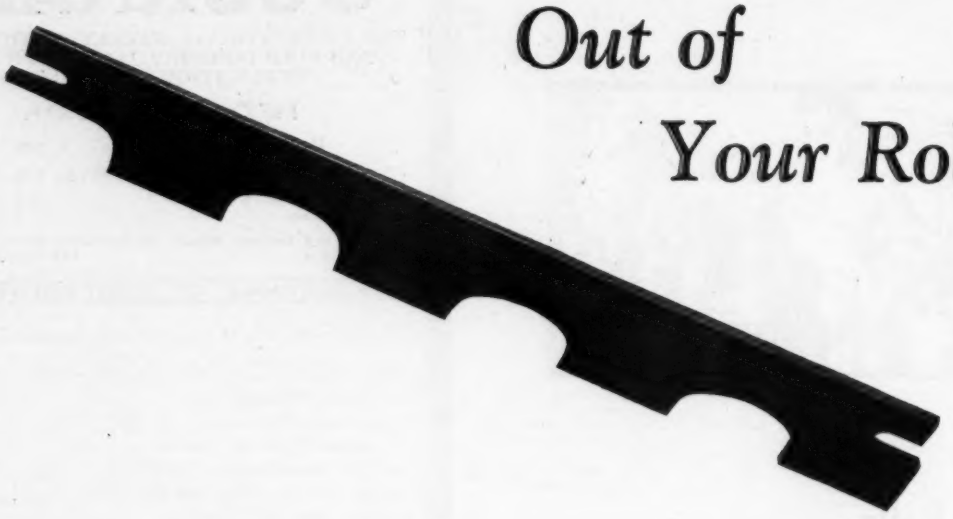
Copyright, 1928, by Lockwood Trade Journal Co., Inc.

Smith Crabtree Group Buys Merriton Mill 23
The Hearst Damage Suit 23
Pennsylvania Mills Ready for Fall 24
Cellophane Products Popular 24
Aatell & Jones Increase Specialties 25
Gould Paper Co. Pulp Mill Burned 25
Seasonal Decline in Chicago 26
Taggart Paper Corp. Entertains Brokers 26
Consolidated Water Power & Paper Expansions 28
Appleton Machine Co. Developments 28
Boston Paper Trade Happenings 30
Southern Merchants Issue Price List 30
Ontario Paper Mills Running Near Capacity 32
Preparing for Forest Fires 32
Howard Smith Form New Company 34
Wainwright Buys Don Valley Mill 34
New York Trade Jottings 36
TAPPI Fall Meeting Features 38
Beckett Paper Co. To Make Improvements 40
Power Plant Section 42
Editorial 54
Has Over 900,000 Horsepower 55
Pacific Straw Paper Busy 55
Study of Forestry Taxation Launched 55
Technical Section
Sulphate Process Patent Review 57
Strength and Opacity in All Rag Sheet 59
Powell River Hog Fuel and Oil Burning Plant .. 60
Review of Pulp Mill Waste Recovery Methods .. 61
Economy of Stabilized Low Pressure Steam in a Paper Mill 63
Operating Data for Drier Canvas 66
Factors Affecting Strength, Finish and Snap of Paper 66
Cost Section 67
Imports of Paper and Paper Stock 74
Paper Mill Stocks and Bonds 78
New York Market Review 80
Miscellaneous Markets 82
Market Quotations 82

THE PAPER TRADE JOURNAL is indexed in Industrial Arts Index

Want and For Sale Advertisements 87, 88, 89, 90

Make a High Speed Beater Out of Your Roll



The new Dowd Patented Staggered Beater Bar really makes a high speed beater out of your present rolls. It increases production greatly, because all kinds of stock circulates about one third faster than with ordinary rolls.

Then, too, with this filling your beater can be completely filled in practically one-half the time formerly required, without the use of paddles.

Mills who wish to increase production, yet keep costs down, are quick to realize the superiority of the Dowd Staggered Beater Bar. Many large mills already have sent in their orders.

Full details of this new bar are available. Write Dowd today.

R. J. DOWD KNIFE WORKS

Makers of Better Cutting Knives Since 1847

BELOIT, WISCONSIN